STATE OF CALIFORNIA

MEETING OF THE

CALIFORNIA INSPECTION & MAINTENANCE REVIEW

COMMITTEE

Tuesday, January 24, 2006

California Air Resources Board

1001 I Street, Coastal Hearing Room

Sacramento, California

MEMBERS PRESENT:

VICTOR WEISSER, Chairman

JUDE LAMARE

DENNIS DECOTA

JEFFREY WILLIAMS

ROGER NICKEY

BRUCE HOTCHKISS

ROBERT PEARMAN

PAUL ARNEY

JOHN HISSERICH

MEMBERS ABSENT:

TYRONE BUCKLEY

GIDEON KRACOV

CHUCK FRYXELL

ALSO PRESENT:

ROCKY CARLISLE, Executive Officer

JANET BAKER, Executive Assistant

STEVE GOULD, IMRC Consultant

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P R O C E E D I N G S

CHAIR WEISSER: Okay, ladies and gentlemen, if I could ask you to take your seats, we will start the meeting. Good morning. For this, our first meeting of the IMRC in 2006, today is for the record, January 24th. I am Vic Weisser, the Chair of the IMRC, and looking forward to a productive year with my good friends here up at the podium and those of you in the audience. What we'll do is just do self-introductions so we get on the record the fact that we do have quorum and we'll start from my far right. There's a new bearded gentleman, as you can see, to my far right. Perhaps he could introduce himself.

MEMBER HOTCHKISS: Bruce Hotchkiss.

MEMBER DECOTA: Good morning. Dennis DeCota.

CHAIR WEISSER: Vic Weisser.

MEMBER WILLIAMS: Jeffrey Williams.

MEMBER HISSERICH: John Hisserich.

MEMBER NICKEY: Roger Nickey.

MEMBER LAMARE: And Jude Lamare.

CHAIR WEISSER: Excellent. I also will draw the audience notice to the strange man sitting in the box to my left, also bearded. I guess I didn't get the memo that the IMRC was going to become the House of David. Very good.

- o0o -

Well, the first order of business is the approval of the minutes from our last meeting that was November 22nd. I will ask if Committee Members have had a chance to review the minutes. Does anybody need some time to -

MEMBER HISSERICH: I have, I will move approval for the minutes.

CHAIR WEISSER: Okay, we have a motion for adoption or approval of the minutes from Mr. Hisserich. Is there a second? And Mr. Williams will second it. Is there any discussion? Hearing none, all in favor of adoption, please signify by saying aye.

ALL MEMBERS: Aye.

CHAIR WEISSER: Any opposed? Hearing none, the minutes are adopted as submitted. Thank you, very much, Rocky.

- o0o -

And now we move into our Executive Officer's Activity Report for the last two months. And Rocky, you're on.

MR. CARLISLE: Thank you, Mr. Chairman, Members of the Committee. First of all, in Tab 2, you have a number of handouts I put in there and I'll go through those kind of one at a time, but the first thing I wanted to talk about is the data information requests, data and/or information requests, we submitted to both ARB and the Bureau of Automotive Repair. I created a database so we could track these a little easier and I also created a tab, as you notice on that first one that shows a follow-up, so we put

in a request to the Bureau of Automotive Repair for a issue paper on the $450 cost limit. I followed-up on that request on January 17th, and right now, it's my understanding that all the staff is engaged with the NGET implementation, so that is on hold. I haven't had a formal response yet as to that issue.

CHAIR WEISSER: Well, I'm sure that the Department, when they make their presentation to us, will give us some idea as to when we might expect that analysis to be completed. Please continue.

MEMBER LAMARE: Gentlemen.

CHAIR WEISSER: Ms. Lamare?

MEMBER LAMARE: Could you explain what NGET is?

MR. CARLISLE: NGET is the Next Generation Electronic Transmission. They have a new contractor that's taking care of the transmitting of the certificates and the test information to the vehicle information database. And so they have been working on that for some time. It's a rather large contract as far as money and it is consuming a lot of resources. The other -

CHAIR WEISSER: Excuse me, Rocky. Just for the record, we'll announce that Mr. Pearman has arrived. Please continue.

MR. CARLISLE: Okay. The other request was information regarding low pressure fuel evaporative implementation. The Air Resources Board sent BAR a letter in November requesting

that they expeditiously implement that program. I followed up on January 17th and same response. Another one -

CHAIR WEISSER: Excuse me. Once again, I'm hopeful that we'll be able to get a little more precise information regarding the status of that when the Department makes its presentation. Thank you.

MR. CARLISLE: Next one was with regard to BAR roadside inspections. I followed up on that on the 17th and again, they're working on that. And the last one was with regard to Consumer Assistance Repairs. I've requested the vehicle identification numbers for vehicles that were repaired under the CAP program. I don't want any of the consumer information, only the VINs, so we can do an analysis as we continue our comparison with test-only and test-and-repair and Gold Shield.

CHAIR WEISSER: And once again, I'm hopeful that the Department or the Bureau might be able to clarify a little further, a little more than status unknown when they chat with us. Thank you.

MR. CARLISLE: Request sent to the Air Resources Board with regard to Fuel Evaporative Testing on how many vehicles will be subject to the low pressure fuel evaporative test and how many vehicles were damaged. Sylvia Morrow did respond that in 2010 ARB estimates that there will be 5.7, actually 5.8 million, pre-1966 vehicles and, of those, the test would be

applicable to half that population per year. And she is still looking into the damage issue. And the last request of the Air Resources Board was with regard to a list of contractors, the potential bidders for Sierra Research contract that was recently awarded, and in your binder you will find that list of contractors. Also I have in the next one - I've separated these, by the way, by the blue paper. There is a request from Assemblywoman Shirley Horton. She would like the Committee to quantify the air quality benefits associated with the direction of vehicles and I have been looking into that. My concern is that currently the only information we have readily available is the report that was recently released by BAR and ARB. The concern I have with that is based on 2002 data, so we're going to look at that and see if we can't maybe update that information. But this is in regard to AB578, the Gold Shield bill that would allow the Gold Shield CAP stations the first test of directed vehicles.

CHAIR WEISSER: Rocky, do you know why the Assemblywoman chose to contact us rather than BAR or ARB directly?

MR. CARLISLE: I do not.

CHAIR WEISSER: And I'm assuming in order to get any more recent data, you're going to have to go the Department and -

MR. CARLISLE: Yes, and actually we have five years' worth of data that Jeffrey has and he's been doing a considerable

amount of analysis on it. It's something that we're just going to have to look at and see if there's another way to go about quantifying the emissions reductions or the benefits of test-only. Because certainly, there is a difference between 2006 and 2002. Another letter I have included in there is a letter from -

CHAIR WEISSER: Excuse me, before you move on, I'm sorry, this is an item that obviously gets the attention of a lot of the stakeholders in the process and that leads me to believe we're faced with a somewhat of a logistic challenge. On the one hand, it would be really desirable to get back to the Assemblywoman as soon as possible in order for us to respond to her request for information. On the other hand, I'm sure that Members of the Committee would like to see the draft of our response prior to it going out. We're subject to all the acts associated with constraining bodies, such as ourselves, from meeting in private. Therefore, I'm asking you to figure out a way with our attorney that we can do a review of this letter as soon as the data is available, the initial draft is completed. It may, in fact, require us to have some sort of a phone conference call or something like that. Of course, I think it is important we try to respond as quickly as possible. Are there are any comments on the part of any of the Members of the Committee on this?

MEMBER DECOTA: Only the - Dennis DeCota, only to the point that this has also been directly asked of the agencies.

CHAIR WEISSER: Oh, I was not aware of that. Oh, great. Maybe we can get a sense from the agencies what their timeframe is for replying. Or maybe not.

CHAIR WEISSER: Please continue Rocky.

MR. CARLISLE: Okay. We also have received a copy of a letter from a number of organizations, primarily - it's addressed to the Governor from American Lung, NRDC, Union of Concerned Scientists, PCL, and the Sierra Club. It's with regard to implementing, again, the low pressure fuel evaporative test and the fact that that does provide a benefit of 14 tons per day by 2010. So they're urging the Governor to see that that gets implemented. And, again, a copy is in your binder. As far as other activity -

CHAIR WEISSER: One moment, Rocky. Dennis has a comment or question.

MEMBER DECOTA: As a member of the BAR Educational Advisory Committee, a very interesting presentation on evap was put on by Rick Escalambre of Skyline College and it might be timely in the next few meetings that Rick do a presentation of what he feels is - he's developed a curriculum, course to train industry on evap and the repair numbers that can be sought through these things - anticipated through these things are very exciting. I mean from the standpoint of

industry. Right. And it would be, I think, well worth the Committee's time to hear out Mr. Escalambre on this issue.

CHAIR WEISSER: Well, I'd be interested in that, Rocky, and perhaps he, as an educator, could also let us know how the industry might approach a smoke test, if the legislation that you'll be talking about shortly comes through. So, if Dennis, if we could ask you and Rocky to coordinate the timing of such a presentation, I'd like it to be made in the February meeting.

MEMBER DECOTA: I know that Mr. Escalambre is willing to do so. All you need to do is write him, Rocky, and it will be done.

CHAIR WEISSER: And I don't know what he'll be able to offer in terms of the smoke test, but at least he could kind of educate us as to the process that we have to go through. Just for the record, I'll announce that Mr. Arney has arrived. Welcome, glad you had a safe journey.

MEMBER ARNEY: Thank you, Vic. I'm happy to be here.

CHAIR WEISSER: Rocky?

MR. CARLISLE: Okay. We've also continued our research on the Chairman's request to look into Safety Inspections. With regard to that, Dr. Gould looked up a Tire Pressure Study that was done by the National Highway Transportation and Safety Administration and he's done a significant amount of analysis extrapolating some of the data from that and trying to come up with a reasonable benefit, if you will, as a

result of simply testing tire pressure when the Smog Check is performed. The results, they don't have a lot of benefits. It does save a number of lives, but -

CHAIR WEISSER: Okay. Come on, that was a softball, folks.

MR. CARLISLE: It doesn't have a lot of emissions benefits, but it does save lives. He estimates it's four lives per year, which equates to about $32 million dollars, because they assign about $8 million dollars per life, which is amazing you can put a dollar value on a life, but they do. So we've got this document, I've included that in your handout, but we've also referred that to a couple of experts to see if we can get their input on it as well before we proceed and we can then maybe make a recommendation to the Bureau of Automotive Repair, maybe the Air Resources Board, that additional work be done on that because, like I say, the emissions benefits are limited.

CHAIR WEISSER: Which, I guess, is because the assumption is folks only check their tires once every two years.

MR. CARLISLE: Correct.

CHAIR WEISSER: Mr. DeCota?

MEMBER DECOTA: There is going to be I think some level of certification in training technicians on these new systems to diagnose tire pressures, okay, as they come onto the market. It would be interesting to see, Rocky, if we could take and put a number to the improvement on proper inflation

versus improper inflation on gasoline mileage that would take and be an air benefit number at the end. In other words, if the car increases its mileage by X, the emission reductions will be Y, and -

MR. CARLISLE: That's actually in this document.

CHAIR WEISSER: That's what they did.

MEMBER DECOTA: Okay.

MR. CARLISLE: There are a number of benefits. For example, it also reduces PM10, but the particulate matter, the PM10, doesn't appear to be as big an issue as the PM2.5 because any time you have low tire pressure, you have an increased rate of wear on the tire itself. That rubber gets transmitted into the air.

MEMBER DECOTA: It's just amazing that every morning you hear of the at least two or three rollover accidents on the freeways in just the Bay Area that I'm familiar with on the radio stations and to create a rollover accident, it used to be a very rare situation. Today, it's almost a daily common occurrence.

MR. CARLISLE: Right.

MEMBER DECOTA: And there is some value in looking at this and I don't know about the value of human life, but I don't know if $8 million dollars would replace Vic, so that bothers me.

CHAIR WEISSER: I think there are going to be people standing in line to catch that figure.

MR. CARLISLE: In addition, we looked at a couple of other reports. Steve went to the - excuse me?

CHAIR WEISSER: Ms. Lamare?

MEMBER LAMARE: Thank you. Before you leave tire pressure, I would note that part of local education campaigns about ozone reduction is instruction to vehicle owners to maintain proper tire pressure and also, so it's not irrelevant to the air quality arena or unknown, although it's not clear how the Smog Check inspection might strengthen that kind of vehicle-owner awareness about the impacts of proper tire inflation, but I would also note given all the attention that we now have on climate change and ways to reduce fuel consumption, Dennis's comment about fuel consumption on under-inflated tired vehicles is very relevant to that discussion, so I'm sure maybe ARB would take our work on this and take it a little bit further and see how it fits into their program. Thank you.

CHAIR WEISSER: Excellent suggestion. Dennis?

MEMBER DECOTA: The correlation between possibly this type of program in evap could be interesting because evap, although we all know we're looking for VOC emission reductions with a proper sealed system, we also have a safety issue called fire and we have a lot of vehicles today, again, on the roadsides that are burning up. And the reason for that are these leaks. And I mean, it's almost something that we need

to think of in a little bit wider vision of having a safety program, I think, that is meaningful. So, maybe this is a step.

MR. CARLISLE: Well, one of the things you notice in the report that 27 percent of vehicles have at least one tire under-inflated by 25% percent of placard and placard is typically the stated pressure on the vehicles. So, it is a problem. Tires lose about one pound per month just normally from - just lost through the tire itself and they also lose one pound of pressure for every ten degrees decrease in temperature, so it can be significant when you're going from summer to winter.

CHAIR WEISSER: Roger?

MEMBER NICKEY: Just a comment. If we exempt the first six years on renewal and we exempt the first four years on transfer, that takes a lot of vehicles out of the mix. Then Smog Check is every other year. If we're gonna check tire pressure, it really ought to be on somebody that sees the vehicle more often, for instance, oil and filter change every three months, 3,000 miles. There's the place that should be doing it.

CHAIR WEISSER: Well I think that's well-taken. And I -

MEMBER NICKEY: I made him speechless?

CHAIR WEISSER: Yeah, no, I'm just - I'm trying to think how we can approach that in a way that we actually might get some

follow-through by both the dealerships and the repair shops that do see the cars more frequently. Fortunately, often more than 3,000 miles, but still more frequently. And perhaps what would be good to do is for us to chat with the organizations that represent those folks and see if there's some sort of approach that they might not be willing to engage in. Frankly, building upon the heightened public interests associated with greenhouse gases and with pollution, criteria pollution, we might be able to see if there's a public interest campaign that repair participants might be willing to engage in. You know, this is a public education issue in my mind. I remember several years ago trying to get the Department of Motor Vehicles to include an insert in vehicle license renewals to remind people to do certain sorts of safety-oriented repairs. But trying to get the DMV to include a slip of paper in their registration renewal notice is slightly more difficult than finding Osama bin Laden and I was unsuccessful. But perhaps working through the private sector, we might actually be able to accomplish something. So, Rocky, perhaps you and I and, we can initially start with Dennis, and then also chat with some of the representatives of dealerships to see whether there are any things that we might be able to come up. Anyhow, please proceed.

MR. CARLISLE: Okay. There was also another report, I've included two additional reports. Dr. Gould found one at the library. It was referred to as the Effectiveness of Vehicle Safety Inspections and in that they include that less than one percent of accidents are caused by lights, brakes or turn signals. The majority of accidents are caused by driver error.

CHAIR WEISSER: What does less than one percent translate into? I just saw a tire inflation thing that says we'll save four lives. What does less than one percent translate into in terms of the number of accidents in California that could be avoided?

MR. CARLISLE: I would have to look into that further, because I didn't apply that to California data.

MR.DECOTA: I believe there's - Mr. Chairman, I believe there's 16 or 17 states that do have a vehicle safety program, annual program.

CHAIR WEISSER: Yes.

MR. DECOTA: Okay. And Maryland is - currently in their legislature to strengthen theirs. They do not have the statistical proof, okay, of the program's validity. But, they do have evidence and testimony that it does save lives and it does take and create less accidents to - I would be more than willing, Rocky, to give you Roy Littlefield's phone number, who is their executive director on their

program, because they're working on it quite vigorously right now to improve it. They already have one, but to improve it, so.

MR. CARLISLE: Okay.

MR. DECOTA: That might help.

MR. CARLISLE: There was another report, too, that - the first report was actually done in 1999. The second one I found on the Internet was done in 2002 and it was entitled The Policy and Effectiveness of Offsetting Behavior and Analysis of Vehicle Safety Inspections, so they both pretty much conclude the same thing, that they're not an effective means, if you will.

CHAIR WEISSER: Well, thank you. I'd like to read both of these and become more educated. I guess I'm reacting to some sort of intuitive sense that at least once every two years for older cars, it makes sense to make sure the lights are working, the brake lights function, the brakes function, windshield wipers work, tires have tread, those sorts of things. But, if there's already been analysis that shows that I'm wrong, that everybody keeps those in pretty damned good shape, then I will be educated. Jude?

MEMBER LAMARE: I prefer to sit next to you where I can you.

CHAIR WEISSER: Will you note that for the next meeting?

MEMBER LAMARE: That was a joke. I have not read these studies. Looking at them very superficially, it would appear that

both of them are studies in which the State is the unit of analysis and I would be extremely cautious about making any interpretations from any statistical study where the State is the unit of analysis because the States are not distributed normally. They're very, very different from each other, they're not equivalent in any sense whatsoever and these are all statistical studies, as I understand it, using regression equations to interpret the results. And so I think we need to dig a little deeper. This will help us raise questions, provoke issues, things to think about and information to put in the mix, but I wouldn't take the conclusions of a regression analysis of States as deciding how we should come down on this issue. Thank you.

CHAIR WEISSER: Thank you, Jude. Rocky?

MR. CARLISLE: Okay. The next item, we're looking at vehicle registration information. This is part of our looking at program avoidance and recently Dr. Williams sent me a file containing approximately 13,000 delinquent registrations. These registrations were delinquent as of December of 2004. So, in January of '06, I sent that up to Teale to match them against the DMV records to see who had done what and when. Seven thousand of those were put into a P&O status, a deferred registration, non-operation.

CHAIR WEISSER: Could you give us that number again, 7,000 of how many?

MR. CARLISLE: Approximately 7,000. These are just -

CHAIR WEISSER: Out of how many?

MR. CARLISLE: Out of 13,000.

CHAIR WEISSER: Thank you.

MR. CARLISLE: The remainder had all come into compliance within about 13 months. Very few - I think there was only one I couldn't account for that hadn't been registered. Now, the other part of that is, of those that are P&O'd how many are actually on the roadway? We don't know the answer to that, so again, Dr. Gould has followed up with a parking lot survey. He went out several days and to date we have about 100 delinquent registrations. I ran some of them last week, I ran some of them last night. I did get it back, there's only a couple that were actually - that were P&O'd, that were actually on the road. A lot of the ones in the parking lot appear to be, they just forgot to put the tags on it. Because, even though when he went out in the last week and they showed delinquent registrations, they were expired, they're currently registered according to DMV record. So, we haven't finished the analysis on this, but we're gonna expand that parking lot survey and possibly even go to other counties to get a representative sample, if you will.

CHAIR WEISSER: Excellent. I love the footwork.

MR. CARLISLE: Okay.

CHAIR WEISSER: How many of those cars were Randy Ward's?

MR. CARLISLE: Probably all of them. We're also - we finalized the preconditioning report. I did send everybody a draft a couple of weeks ago on that one and that will be in the final report - the draft report that I submit in the next 30 to 60 days to the Committee. I've also been drafting an Executive Summary that would include the items that we researched and mentioned in the previous report to the legislature and the Governor and have yet to be implemented and so that's still in the drafting process. We've also continued the follow-up on other State data. We recently received a report from the Sierra Research Group and that's their annual evaluation of the Smog Check programs and I think overall, correct me if I'm wrong, Steve, I think California got a C+, was it, for our emissions program?

CHAIR WEISSER: Excuse me, from a C+ from whom?

MR. CARLISLE: From Sierra Research. They have a grading system, they grade all the states' programs. And if anybody wants to look at that -

CHAIR WEISSER: I would like to look at that.

MR. CARLISLE: I've got it right here.

CHAIR WEISSER: Thank you. I would like to take it.

MR. CARLISLE: Okay.

CHAIR WEISSER: I will get it back to you.

MR. CARLISLE: Great. It's the only copy I have.

CHAIR WEISSER: So Sierra Research grades people -

MR. CARLISLE: They grade the programs.

CHAIR WEISSER: - and they do that and then successfully win a contract for the next year. I'm impressed, I'm impressed.

MR. CARLISLE: I also reviewed the Request for Proposal for the new Referee contract. As you may be aware, that is a no-cost to the State type of contract and they recently had a bidders' conference on that. I did not attend it, but I understand there were a number of bidders. And essentially, the contract - currently the contract in round terms costs the State approximately $6 million dollars as my understanding. The Referee did about 17,500 inspections. Now, if you take that out to the logical conclusion of how much per inspection, it works out to about $340 per inspection. But there's a lot of other services that go into that that really isn't included in that $340 per inspection. They take care of the call center to schedule those inspections, they have a significant number of cancellations they have to account for, they have to report to the Bureau of Automotive Repair, they also do research for the Engineering Division at the Bureau of Automotive Repair. For example, when fuel evap was being researched, they did a lot of the testing for that. When vehicles would fail on the roadside, they would go to the Referee to be tested again and then sent to the Air Resources Board for shed testing. So, there's a number of things that they do.

This RFP essentially suggests that they come up with a cost per inspection for the various types of inspections and that they will implement the contract based on that, essentially. So, for example, if you had an engine change, it might be a $300 dollar inspection, who knows? But if you had a dispute, maybe it would be a $50 dollar inspection. But, what becomes more problematic is, number one, if we implement - or if BAR implements Fuel Evaporative Testing, there could be dispute issues there. More importantly, if the legislature does, in fact, pass AB1870, which is a recent piece of the legislation that was introduced this last week that would provide a smoke test, then that would be the relief valve if the consumer objected, you know, or disputed the fact that they had a smoking vehicle. So, then what do you do with that vehicle? Does it go to the Referee and pay $100, $200, $300 for an inspection? So there's a number of issues or problems that it could create at those types of costs.

CHAIR WEISSER: Are there any questions from Members of the Committee on that particular item? I'm very much interested in it because of the - I guess one of the issues I see is kind of the multiple benefits of having the community colleges involved in the program, both in terms of their credibility to the consumer and to the industry and the training that their participation in this program allows

them to provide to the technicians. So, I'll be kind of trying to keep my eyes on this one pretty carefully. When does the RFP call for the bids to be submitted by, Rocky?

MR. CARLISLE: The Intent to Bid letter is due on February 2nd, proposals are due on March 13th. The program has to be implemented by September 1st.

CHAIR WEISSER: When is the bidding process - who is doing the evaluation of the bids and when will that be accomplished?

MR. CARLISLE: Let's see -

CHAIR WEISSER: And if you're not certain, I'm sure that the Bureau might be able to help us.

MR. CARLISLE: No, I'm not certain, but the Notice of Intent to Award is gonna be done by March 30th, so that's in the document.

CHAIR WEISSER: I'd be real interested in hearing from the Bureau in terms of the process they're gonna be using for evaluating the bids. Did the RFP include the -

MR. CARLISLE: It has the proposal, yeah, it has all the methodology to evaluate the bids -

CHAIR WEISSER: Great.

MR. CARLISLE: - and it's quite extensive.

CHAIR WEISSER: Could you make copies of that and distribute it to the Members of the Committee, that portion of it?

MR. CARLISLE: Yes.

CHAIR WEISSER: And does it also describe then who is going to be involved in the evaluation process; is it going to be limited to BAR, is ARB involved or are there external, impartial -

MR. CARLISLE: It's gonna be a BAR evaluation team.

CHAIR WEISSER: Okay.

MR. CARLISLE: Okay.

CHAIR WEISSER: Comments? Anything further, Rocky, in your report?

MR. CARLISLE: Yes, as a matter of fact. On January 17th, the Automotive Business Coalition had invited me to Oroville to be a guest speaker at their meeting. They were very receptive to the research that the Committee is doing and they're gonna try to attend via the Internet. In February, I have scheduled a speaker from the Tool and Equipment Institute. This is our ongoing research on OBD II. The Tool and Equipment Institute has a number of pieces of equipment, or their manufacturer members have equipment, that is already being used for ODB-only testing around the country, so they're gonna talk about that. And finally, the next meeting on February 28th is gonna be in Emeryville and there's maps for locations on the back table and I think we've included maps for the Committee Members, so.

CHAIR WEISSER: That's at the City Hall -

MR. CARLISLE: Correct.

CHAIR WEISSER: - or that building just adjacent to the - oh, it is the City Hall -

MR. CARLISLE: City Hall, yes.

CHAIR WEISSER: - in the Counsel Chamber meeting room facilities. It's quite a nice place for those of you that haven't shown up before there.

MR. CARLISLE: And that concludes my presentation.

CHAIR WEISSER: Rocky - I mean - why do you let me do this - Dennis?

MEMBER DECOTA: As a Member that's been on the Committee for quite some time and had at least a couple of Executive Officers, I want to take and compliment you on your ability to put the information on paper, get it to us, give us the guidance that we have had as far as what progress has been made and the completeness of the job you're doing. I think you're doing an excellent job and your staff also, and I just, as one Member, want to say thank you.

MR. CARLISLE: Thank you.

CHAIR WEISSER: Should we take a vote on is Rocky doing a great job? I don't think it's really necessary. I think we're all, you know, have a great deal of appreciation for the work that you've done for the Committee over the time that you've worked with us and I'm looking forward to more. In that light, we will be giving you the bonus that's rewarded to outstanding State employees consistent with the entire

State compensation system and don't spend it all in once place, Rocky. Anything further?

MR. CARLISLE: No, that's it.

CHAIR WEISSER: Any questions of Rocky from any of the other Committee Members? We'll open it up then for some audience questions, if there are any, regarding just the presentations that Rocky has made. Are there any comments or questions? Mr. Peters?

MR. PETERS: Well, I could - I'm Charlie Peters, Clean Air Performance Professionals, coalition of motorists. I could probably stand up here and ask questions all day, but rather than go there, let me just ask one simple question. There was a survey done - there's indication of a survey done, looking at where these cars are coming from, where they're going to, whether - assuming whether or not they're getting Smog Checks, but what I found was interesting is what was not said. And that is I wonder if there's any tags on cars out there showing that they've been registered or they're registered in areas whose zip code doesn't require a Smog Check. And what I just said was tags on cars that don't belong on that car, so I think you have to do a survey that includes all the cars and verify the tag numbers and so on and research all that data to get any meaningful appropriate information as to what's going on in the fleet. Thank you.

CHAIR WEISSER: Thank you, Mr. Peters. Are there any other comments, please?

MR. CONWAY: Good morning. John Conway, Menlo Park Chevron. I was very interested in Rocky's report about air pressure. As a shop owner in the State of California, every lube, oil, and filter that comes through, we do check the tire pressure, so. We also perform a 25-point safety inspection and I think with what's going on in the automotive repair industry, it would be nice to charge for that safety inspection that we do at the service station or at the oil changing facilities in the State as an additional revenue stream to shop owners in the State, so I think that might be something to consider. A new revenue stream for shop owners, we could sure use the income.

CHAIR WEISSER: Thank you. Dennis, you might want to stay up here for a minute.

MEMBER DECOTA: Mr. Conway, for the Board's information is now (unclear) new president as of last week, so he's my boss so, just so the Committee knows and realizes that, I think it's important. Thank you, John.

MR. CONWAY: Thank you.

CHAIR WEISSER: Thank you. Thank you for your disclosure, Dennis. I am grateful for the stations that do safety inspections as a matter of routine when cars are brought in. I don't believe it's within this Committee's authority or

interest to necessarily try to set up revenue streams for the industry. You're in a competitive business. What it would - what I would like to explore is the notion of trying to provide some advantage for those people who are doing those sorts of inspections and I'm wondering that hopefully the conversations we have with you and folks from dealerships might be able to uncover some promotional advantages that might be made - that might be helpful. Whether or not you're able to use that to build a new income stream or enhanced income stream, I have no idea and I'm not sure it's this Committee's purview to really get involved in that. Though I understand the kind of the pickle that many members of the industry have found themselves in. Are there other comments from the public? Very good.

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Hearing none, I notice the next item, Rocky, is the review of the IMRC Mission Statement. Is that included in our binder, because I didn't see it?

MR. CARLISLE: No, I didn't include that. I - we had originally put it on the Agenda because we thought that Chuck Fryxell was gonna be here and so we'd discuss that with the new Committee Person.

CHAIR WEISSER: Okay. Now, Committee Member Fryxell has been unable to participate in our sessions yet and we've had some contact with him. It's uncertain as to precisely when he

will start and I think, frankly, you know, we ought to just put this thing to bed. We have a Mission Statement. Those of you who were with us last meeting in November reviewed it. The discussions and comments that we heard previously and at that meeting were that the Members of the Committee were comfortable with it. You don't happen to carry it with you in your pocket, do you Rocky?

MR. CARLISLE: No, but I can pull it up on the website.

CHAIR WEISSER: Pull it up on the website, if you can and we'll do a quick read-through, in which time we'll just see if there, in fact, the Mission Statement does still enjoy the support of the Committee Members and then we can move forward.

MR. CARLISLE: You should have it.

CHAIR WEISSER: Okay. So let's - so the audience can see this, I'm gonna read it through in blitzkrieg fashion. The IMRC is an advisory body established to review and evaluate the vehicle inspection and maintenance program and to recommend program improvements to the Administration and the legislature in a timely manner. The goals of the IMRC are to report to the Administration and the legislature on program performance and to identify and recommend methods to ensure that the program is effective in achieving emission reductions needed to meet clean air standards, efficient in terms of achieving emission reductions with the least

possible cost to individual participants and society as a whole and equitable in terms of the allocation of these costs, and, lastly, fair to stakeholders including motorists, vehicle inspection and repair service providers as well as to the public at large. So that constitutes the Mission Statement that we adopted when I first came on board the Committee, how many - that was three years ago - I really don't remember when I came, I'm having so much fun - when I came on board. Does any Member feel or believe that it would be desirable to make a change or improvement to this or is it okay? Can we have a motion to readopt unchanged the Mission Statement. And Ms. Lamare makes that motion. Is there a second to that motion? Mr. DeCota makes that second. Is there a discussion among Committee Members to that motion? Is there any comment from the public on the Mission Statement that I just raced through? Seeing none, we will then come to a vote. All in favor of the re-adoption without change of our Mission Statement, please signify by saying aye. Any opposed please signify by saying no. Hearing none, the motion carries unanimously.

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We'll move on then, to our next item of activity, the BAR Update. Welcome to the IMRC for 2006. It's great seeing you guys, look forward to a very productive year.

MR. GUNN: Good morning. Marty Gunn with the Bureau of Automotive Repair. Back in December 15th, the Bureau of Automotive Repair received a written request for information from this Committee on four topics. The Bureau will be providing the Committee with a written response to these four requests, but I'll attempt to at least give you a preliminary address today. Issue No. 1 is the Chair of the Committee requested an Issue Paper addressing the $450 repair cost limit. At this time, BAR does not have the resources to dedicate staff to the tracking of this relatively small number of vehicles. The workload of manually - the paper that was requested would require some manual review of 1,200 plus vehicles, so the workload of manually reviewing an individually - each vehicle's repair invoice in order to answer this question would be very resource intensive and we don't have the resources at this time.

CHAIR WEISSER: Excuse me, if a legislator chose to introduce a measure to adjust this according to inflation since the last time it was adjusted, which - oh, was never, would the Bureau oppose or support that measure?

MR. GUNN: I don't know. I would suppose it would depend on the review of whatever is proposed by the legislature and the context in which it's proposed.

CHAIR WEISSER: What if they just said we're gonna do it. I mean, times have changed. It's eight - X number of years passed, we ought to adjust it by CPI or something?

MR. GUNN: Again, I personally don't know, but I think the legislature can do that.

CHAIR WEISSER: Oh, I'm sure the legislature could do it, I'm just curious as to whether the Bureau would be supportive or not. I'll ask the same question of ARB when it's their turn to come up. Thank you. Dennis, you had a question on that?

MEMBER DECOTA: How can this Committee do it's job, Mr. Chairman, if - that it's supposed to do under legislative direction if we can't get the information we need to make recommendations?

CHAIR WEISSER: Well, it makes the job a little more challenging, obviously, but listen, I have great respect for the management and the staff of the Bureau. They need to make decisions associated with what they believe their priorities are. When they are unable to do analysis as, in this case, because the priorities are such that staff are being dedicated to other things, then we and other decision-makers have to move forward without the benefit of the data and merely rest our judgments on judgment.

MEMBER DECOTA: Thank you.

CHAIR WEISSER: And I'm - in the absence of data, it's my judgment that it would serve the State well to adjust that

repair cost limit. Having seen no data to assert that it was not a reasonable idea, I'd say it would be interesting to find the legislator that might be interested in attacking that issue. Mr. Hisserich?

MEMBER HISSERICH: Question, I note in each of the instances in which a request was made, it was deferred because the BAR is working to implement the NGET. How much of the efforts of the BAR is that NGET taking? I mean, it seems as though everything is on hold to implement that. Could you - in relative to the total effort there, is this like all consuming?

MR. GUNN: No. BAR's a busy place.

MEMBER HISSERICH: I see.

MR. GUNN: We do a lot of different functions and no doubt about it, NGET does take a lot of resources, but particularly resources in the area of being able to do analysis of data and that sort of thing, is that why it seems to - because I think most of these were data requests, if I'm not mistaken. Yeah, and unfortunately I'm probably not the best person to ask regarding prioritizing everything the Bureau has to do when allocating all the resources. I'm not the chief of the Bureau of Automotive Repair, but I would imagine that in reviewing this request in context with everything else the Bureau has to do, including NGET, that it just wasn't feasible to do at this time.

CHAIR WEISSER: Please continue.

MR. GUNN: Okay. Item No. 2, the Committee requested an update on the implementation of low pressure fuel evaporative testing. And this is somewhat involved, so I'll try to read this. BAR has been working with the Air Resources Board to develop a process to conduct low pressure evaporative testing. Each agency has its role in identifying and validating issues and solutions in the process of implementing this new smog emissions test. In November 2005, ARB provided findings to BAR as to it's validation of a process of testing. In response, BAR started an internal working group to do three things: one, identify topics, issues, and processes to formulate necessary information to proceed with the implementation through regulatory - regulation process; secondly, assemble all known related evap emissions data; and finally, coordinate a timeline of principle steps for action to implement. Issues that are being identified as being researched and, if problematic, mitigation activities are being proposed and initiated. A principle step will be industry workshops that will help receive and address new questions and concerns in advance of the formal regulation hearing process. The workshop is not a formal component of regulatory hearings and allows freedom of interchange and discussion useful to pre-regulation

writing. BAR expects these workshops North and South, to be completed by April of 2006.

CHAIR WEISSER: So the workshops will be completed by April and then based upon the information that's garnered in the workshops, what's the next step?

MR. GUNN: I believe the workshops are looking for the workshops for the technical data from responses to everybody to help write the regulations, so I imagine at that point, the regulations will be written or some type of draft will be composed and submitted for the regulation process through the APA, the Administrative Procedures Act.

CHAIR WEISSER: And do you have any sense of that timeline, what that might be, how long it will take to draft the regulations?

MR. GUNN: No, I - that's a great question, how long regulations take. I think the regulation procedure takes about a year, but, you know, I don't have a crystal ball.

CHAIR WEISSER: Are there any comments or questions on this item? Well, I have a comment, and that is on the one hand, I want you to do the most thorough job that you can, make sure that the situation is approached with a rational and thoughtful - in a rational and thoughtful manner. On the other hand, I want the darn thing adopted yesterday and this Committee has, as has the Air Resources Board, has been kinda pushing on this for a while. So, with that mixed

series of directions, you know, please proceed with all deliberate speed, I think the Supreme Court once used on an issue more important than this, but we're gonna be tracking this closely and we're very much interested in seeing it move forward. Thank you. Move on.

MR. GUNN: Issue No. 3, is BAR continuing to collect roadside emission data? Yes, we do, we are. We have roadsides going at this time.

CHAIR WEISSER: Cool.

MR. GUNN: And fourth, the Committee is requesting BAR provide vehicle identification numbers for all vehicles participating in CAP, both repair assistance and vehicle retirement. BAR is awaiting a legal review of the State of California Privacy Act and we are unable at this time to fulfill this request. However, BAR would like to know what this data will be used for because we potentially have it sitting on the shelf. So if you can tell us specifically what you want, then perhaps we can speed up this process and facilitate your request. Otherwise, we're waiting to hear from legal.

CHAIR WEISSER: I noticed that this request was, I think, made in November of 2005 and there's been ample time for that sort of question to be asked informally through Rocky or answered when Rocky called up and ask what the status is, so I'm kind of confused a little bit by, you know, your

response. Is that something that you've already communicated to Rocky?

MR. GUNN: Not that I have, no, sir.

CHAIR WEISSER: Rocky, kind of -

MR. CARLISLE: Yeah, the reason we want the data, we want to be able to pull those - those tests and repairs conducted by Gold Shield stations specifically on CAP repairs and see if we can do an analysis on the repair effectiveness of test-only versus test-and-repair. I'm sorry, versus Gold Shield versus test-and-repair and some of these other issues we've been looking at for the comparison of station types. And without those VINs, we've got no way to identify which repairs were done under the CAP Program. We can identify which repairs were done at a CAP station, but on the VIN, it doesn't identify which were done under the CAP Program, per se.

CHAIR WEISSER: Rocky, when you make a request of BAR, don't you include why you're making the request, what your - the reason that you're making the request and -

MR. CARLISLE: I believe here it was -

CHAIR WEISSER: And if - if -

MR. CARLISLE: - to continue to perform an important function relative to low-income repairs in effort to improve our research, we would like to request the VIN of both scrap vehicles and CAP-repaired vehicles.

CHAIR WEISSER: Well, it might be better in the future, and I'll take this as a lesson to be learned, if we are as explicit as possible as to how we're going to be using the data. I think it would also be really desirable to pick up a telephone and communicate when an issue like this arises. It's something that we could have saved, you know, a month and a half on, in terms of getting the information that you need in order to determine whether you have the data on hand or whether in fact, you're gonna have to go forward with some mysterious legal opinion regarding privacy issues. So, I think we both have something to learn from this particular data request. Jude?

MEMBER LAMARE: Mr. Chairman, I agree. I think it would be helpful to all of us to have a written understanding of what we want to do with the data. And it seems to me that this is a small sub-sample, it's not a random sample of repaired vehicles, but it's a small sub-sample over which we know a lot more and where the repairs are done under the direction of the State and with consultation with the State and so it represents a subset of vehicle tests and repairs where we could make a comparison and it provides us with a different level of understanding of what's going on with the comparison on test-and-repair and test-only stations. So, it wouldn't necessarily be obvious to the Bureau why we would want to do this and I think there's a certain amount

of sensitivity about the CAP program since this Committee has already raised a number of issues about how little people use the CAP program and what appears to be the uneven availability of that program in certain regions of the State. Thank you.

CHAIR WEISSER: Thank you. Rocky, did you have something to add to that?

MR. CARLISLE: Yes, Mr. Chairman. The other issue is we want to look at the durability of the repairs at CAP versus test-and-repair because the CAP repairs are on average, about double what the average test-and-repair repair is and, consequently, we'd like to see if they're more durable as a result. So, again, without that data, we're -

CHAIR WEISSER: Well, and all I'm suggesting in terms of take away messages is that when we ask for something, it would be very helpful for the Bureau, as well as others -

MR. CARLISLE: Absolutely.

CHAIR WEISSER: - to have a very explicit idea of why we're asking for it and what we plan to do with it, as it would have been very helpful had the Bureau called you up and said, why are you asking for this data, how - what are you gonna do. Okay.

MEMBER DECOTA: I have a question.

CHAIR WEISSER: Yes, Mr. DeCota?

MEMBER DECOTA: Rocky, are we asking BAR for information regarding 14B - as in boy? Are there any questions in the hopper to BAR or ARB regarding Agenda number - topic No. 14D? I thought there was, but I don't see them in this and maybe they don't belong in here.

MR. CARLISLE: No, we've got all that data. We have all the VID data.

MEMBER DECOTA: Okay.

MR. CARLISLE: We've got that since 2000.

MEMBER DECOTA: We're not - we don't have any questions?

MR. CARLISLE: No.

MEMBER DECOTA: Okay.

CHAIR WEISSER: Okay. Is there anything further, other issues that you'd like to alert us to, things that are going on that the Committee might be interested in knowing about, things that we might be able to be helpful to you about?

MR. GUNN: You got me on the spot. Nothing comes to mind right now.

CHAIR WEISSER: Okay. Cool. Thank you very much.

MR. GUNN: Thank you.

CHAIR WEISSER: I guess we have to allow public comment on each and every item, so from now, I'd like you to consolidate these two items so we'll be able to do that more efficiently. Okay. So are there any comments from the public regarding this latest report? Mr. Peters?

MR. PETERS: I'm Charlie Peters, Clean Air Performance Professionals, a coalition of motorists. I'm a bit confused. It certainly seems to me as though we seem to be headed down a trail here that seems to be very interested in going in a specific direction. As an example, the issue of the $450 cost limit that was just mentioned participating all the way back to 1990 and the process that took place between California and Federal EPA, etcetera, the opinions there were that there was an absolute legal requirement, completely nonnegotiable, that the Clean Air Act Amendments of 1990 required a specific cost limit and specific escalation and that was not negotiable, period. So, if we're gonna have to have all kinds of studies and evaluations and so on, if in fact what they said was correct, maybe the Committee ought to look at that rather than trying to slam BAR. Item 2, the fuel evap implementation issue, I have certainly provided my opinion to the Committee on numerous occasions which is certainly a matter of record. The issue of the Gold Shield and this compare - this data as to the performance of the Gold Shield or test-and-repair, test-only, unless there is some sort of evaluation whether or not what's broken is getting fixed and some sort of a comprehensive evaluation that is not comparing apples and oranges, I don't see what the data that you're asking for would accomplish, because the cars going

to different stations meet different criteria. You have completely different environment in those stations, different reasons for doing things, so unless you do some comprehensive evaluation as to whether or not something that's broken is getting fixed, whether or not something's actually getting accomplished or not in the real world with real people and real cars, I don't see that that does anything other than provide whatever data that you want to go where you'd like to go predetermined and I think it's appropriate to look at that in a more comprehensive fashion, Mr. Chairman and Committee.

CHAIR WEISSER: Thank you Mr. Peters. Are there any other comments from the public? Hearing none, we'll move on to our next item, which is a presentation from the Air Resources Board.

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MS. MORROW: Good morning. I'm Sylvia Morrow with the California Air Resources Board and I'll go ahead and provide a little bit of an update, before I go into the presentation, that you might be interested in. First of all, Governor Schwarzenegger appointed a chairman to the Air Resources Board. His name is Dr. Robert Sawyer and we're very happy to have him so I thought I'd bring that. Also -

CHAIR WEISSER: Well, I just would like to interrupt you right there. I've met with Mr. Sawyer - Dr. Sawyer prior to his

appointment and I think the State of California is extremely fortunate to have been able to identify and appoint a person with his background, experience, interpersonal skills, and ethics to this job. I am jealous that you get to work for him. He seems like a pretty decent guy.

MS. MORROW: Also, I'd like to report that ARB/BAR Smog Check Report was approved by release by the Governor's Office and transmitted to the legislature and ARB did provide the IMRC with that notification.

CHAIR WEISSER: Sylvia, if I might, could you remind me, that report was for what year?

MS. MORROW: It was the April 2004 report, however, it was amended in 2005 to reflect things that had happened during the -

CHAIR WEISSER: The legis -

MS. MORROW: - public process of the report.

CHAIR WEISSER: Right. And when is - what's your next report cycle?

MS. MORROW: I'd have to check back on that. I don't have it off the top of my head.

CHAIR WEISSER: Would you do that and let Rocky know and he can email us and let us know what your cycle is?

MS. MORROW: Okay.

CHAIR WEISSER: Thank you.

MS. MORROW: Also, as you're aware, ARB did transmit a low pressure evap report to BAR in which ARB urges BAR to implement the test, so we did accomplish that task. In one of your previous questions today, you had asked if ARB had responded to, I believe Assemblywoman Horton, in regards to the information that she had asked from the IMRC Committee. I contacted our leg office and she has not requested that type of information from ARB.

CHAIR WEISSER: So she's just requested it from the IMRC?

MS. MORROW: That's correct.

CHAIR WEISSER: And BAR or not BAR?

MS. MORROW: I do not know about BAR, but she has not requested that information from ARB.

CHAIR WEISSER: Okay. Thank you.

MS. MORROW: Okay. In regards to the waiver issue, we believe that if a waiver amount is raised and more repairs are made, ARB thinks it would be good for the environment, so we would support something like that.

CHAIR WEISSER: Well, you know, this Committee doesn't per se sponsor legislation. But there are organizations that are represented on this Committee that – that do and I'm wondering whether or not ARB would be - would consider working with those organizations - one or more of those organizations in identifying a legislator that might be interested in sponsoring such a measure.

MS. MORROW: Okay. I'd have to contact our leg office.
CHAIR WEISSER: Sure. Could you check it out and see if there's an opportunity and I'll check out with other Members of the Committee to see whether there's other organizations that might be interested in pushing that idea.
MS. MORROW: Okay. And then, finally before I go into the next task, I do apologize for not providing the IMRC with the information regarding if there was damage due to low pressure testing that was done in El Monte and I will make sure that by the next meeting I do have that information available to you.
CHAIR WEISSER: Thank you, Sylvia. Are there any questions of Sylvia by any Members of the Committee? Thank you. Are there any comments from the public regarding the ARB's report?
MS. MORROW: I still need to -
CHAIR WEISSER: Whoops. Okay. Any comments from the public regarding this portion of the ARB's report? Hearing none.
MS. MORROW: Okay. I'll just give a little pre - before I start into the presentation. As you know, ARB and BAR contracted with Sierra Research to develop a Smog Check Evaluation Plan. First Sierra, ARB and BAR reviewed the Smog Check Program pathways to identify potential issues that should be evaluated. For each issue, Sierra, ARB, and BAR looked at specific questions that could be answered regarding the

issue, the potential emissions impact, potential analytical tasks, potential data resources, and estimated cost for analysis. The draft potential areas of analysis table that Sierra, ARB, and BAR developed is on the back table and each of the Committee Members should have a copy of it right now. ARB and BAR would like the IMRC and the public to review the table for completeness. If there are issues that are not addressed in the table or if you have comments on the contents of the table, we urge members of the public and the IMRC to provide written comments to the IMRC in writing prior to the next - the February IMRC meeting. So right now I'll go ahead and go through just a general description of the analysis plan. Oops. Okay. First of all, task one of the project called for development of a plan to improve the emission reduction capability of the Smog Check Program - oops, sorry. How do I go back? Okay. The plan has been broken down into two primary components. One, analytical tasks and two, the development of recommendations for testing. So Sierra, in consultation with ARB and BAR, have developed a draft list of analytical tasks. It is anticipated that test program recommendations will be formulated as the analytical tasks are completed. Issues to investigate - these are the issues that are listed on the table and these are the issues that we would like comments from the IMRC and the public and if there are any additional

issues. First of all, what happens to initial test failures that do not complete the Smog Check requirements, ie; a car fails a Smog Check Program and then is never subsequently registered in California. There's a lot of questions and if you look at the table that discuss, well, what happens with those cars. Are vehicles being tested with TSM when ASM is required? Do vehicles change test type in midstream? And the TSI is the two-speed idle test that it was required in the basic program areas and a two-speed idle test is required many times when a vehicle is not capable of being driven on the dyno. Are test aborts being used to influence the test outcome? Which stations and station types deliver the best performance in terms of identifying high-emitting, tampered, or defective vehicles, or the worst performance?

CHAIR WEISSER: May I interrupt you here?

MS. MORROW: Sure.

CHAIR WEISSER: Your - those are three specific types of vehicles; high-emitting, tampered or defective.

MS. MORROW: Yes.

CHAIR WEISSER: Or are you considering all of that one?

MS. MORROW: Well, we're just looking at that as, you know, that's just a summary of one analytical task. It could be that many types of data sources would be used to get out - get at that information. Okay. Which stations and station types deliver the best performance in terms of after-repair

emission rates, both immediately after repair and during subsequent cycles? Why is a large fraction of vehicles that fail and go on to receive a Smog Check Certificate failing at the roadside within a year? What is the emission impact of improper testing and/or certification activity? And, is there any way to encourage or offer incentives for more thorough and effective repairs?

CHAIR WEISSER: Could you go back to that what is the emissions impact of improper testing?

MS. MORROW: That's correct.

CHAIR WEISSER: What - could you be a little more explicit? I mean, are you trying - what are you trying to find here and what - how are you going -

MS. MORROW: Well, we're trying to find is are cars being clean-screened, which, you know, they're not actually getting the test, but it's a fraudulent activity -

CHAIR WEISSER: How are you going to find that out?

MS. MORROW: Well, and that's part of, you know, there are some data sources that are listed on the table that we could use to take a look at those kind of activities and determine what the emissions impact would be.

CHAIR WEISSER: Okay. Thank you.

MS. MORROW: So this will be our approach. Many questions can be addressed fully, or at least partially, by analysis of existing data. And we have identified the data in the

table. Analysis will also identify if new data or information are needed to fully address the question. Our next steps; once we receive the comments from the public and the IMRC, we will prioritize the analysis efforts with BAR, ARB direction, and with IMRC input. The timeframe, well right now we are expecting that comments will be provided by the next IMRC meeting, so probably right after the next IMRC meeting we will start looking at what the comments were and prioritizing the task. And then work will begin on each task after consultation with ARB. Sierra will work on each task after consultation with ARB and BAR. And that's it.

CHAIR WEISSER: Wow. Are there representatives from Sierra here today?

MS. MORROW: Yes, there is.

CHAIR WEISSER: Okay. What's the best way for people, including this Committee, to communicate to provide you input to respond to the questions that you've asked them to respond to?

MS. MORROW: Well, I contacted Rocky Carlisle this week and asked him if we would be able to use the IMRC email and for the IMRC to take the written comments and he was okay with that. So we would like the general public to provide their comments to the IMRC Committee in writing or via email so that we can fully understand them.

CHAIR WEISSER: How much are we charging ARB for this work, Rocky?

MR. CARLISLE: It remains to be seen.

CHAIR WEISSER: Okay.

MS. MORROW: Isn't is part of our in-kind?

CHAIR WEISSER: John?

MEMBER HISSERICH: Will any of the - will the use of this data require this analysis by the Attorney General about the privacy considerations that were raised when the previous ones came up?

MS. MORROW: I'm not aware if it would.

MEMBER HISSERICH: I mean, I just wonder because it - there is a proprietary organization gonna receive the information and some of this seems- I mean, I'm all for doing the analysis, but I'm just wondering if that issue being addressed in relation to our request might also be sort of dealt with to get that issue clarified before this all goes forward.

MS. MORROW: Yeah, go ahead. This is Phil Heirigs with Sierra Research.

MR. HEIRIGS: I'm with Sierra Research, Phil Heirigs. Good morning. This is the first time I've been to one of these meetings, so I appreciate the opportunity. In terms of the VINS and those issues, in the past what we have done is is signed confidentiality agreements that the data would sort of remain in-house and not to be distributed to any – any

outside agencies. So, typically in the past, we've dealt with those kinds of issues through fairly detailed and precise confidentiality agreements.

CHAIR WEISSER: I think the IMRC would be willing to sign any confidentiality agreements that BAR needs in order to be sharing of data. Rocky, would you follow up with that?

MR. CARLISLE: I will.

CHAIR WEISSER: Thank you. Jeffrey?

MEMBER WILLIAMS: I'm very pleased with this list of items to emphasize. My main presentation today was to give an example of using '87 VW Golfs to show why one really needs to look at many of these issues. You preempted me a little bit, but maybe I preempted you, too, because I think you'll find that your estimate of the resources for analysis are considerable underestimates. I can speak from bitter personal experience over the last weeks trying to get today's talk ready. But I think you'll find also that it's much more complex than any of us really would like to agree.

MS. MORROW: Yeah.

MEMBER WILLIAMS: But I'm definitely in favor of all of the topics and the emphasis.

MS. MORROW: Well, Jeffrey, also if you have any data that we can use for analysis, I mean you could provide us comments on that because, you know, we've - or Sierra, ARB, and BAR

have brainstormed to look at the data source and so if there are additional data sources, we would definitely -

CHAIR WEISSER: I'm afraid before we'd be able to share that data we'd need an opinion from our attorney.

MALE: - Confidentiality agreements. I - you know, that was one thing that I was going to mention and I do want to highlight that if the IMRC Committee Members or the public have data specific to any of these analysis tasks, arms are wide open. As anyone who has analyzed emissions data in the past knows you're often hamstrung by sort of the quality and quantity of data that are available. So, you know, from us, as well as ARB and BAR, we would appreciate any ideas.

MEMBER WILLIAMS: I'd like to say you're almost hamstrung by the enormous quantity of data available. The amount that I've gotten now is some 70 million records and it's a bit hard to keep track of it all.

MS. MORROW: You know, I don't -

MEMBER WILLIAMS: Well, it says on the green dot -

CHAIR WEISSER: Here why don't you use this one.

MEMBER WILLIAMS: It's probably the optimal outcome anyway. The - well, actually, it's not the data that matter, well, you can have the computer programs that I've spent the last several months writing that clean the data. That's where the work is really, as I think you all know.

CHAIR WEISSER: Mr. Pearman?

MEMBER PEARMAN: I'd just like to inquire about how ARB sees as the purpose of this project. When I look at the items you're investigating, it seems that you kind of accept the universe of who and what is getting tested in the entire breadth of the number of vehicles being tested and just looked at how that interfaced with the stations and the testing program, but not at excluding those vehicles that don't need to be in the program. We got an email, I guess the Committee did, from ARB about Smog Check and Test-Only stations and it points out that the high-polluting cars make up only 10 percent of the cars on the road, but put out about 50% of the total pollution. And so I look at your issues to investigate, I don't see that you're getting to focusing on that 10 percent and so I look at this as an evaluation and improvement of the program project. What I see here is just accepting as it is and fine-tuning the millions of vehicles that are in the program and how they interact with the stations. Can you comment on that?

MS. MORROW: Yes, we'd love to have you provide that comment to us so that when we look at the analysis plan, we can consider it. From ARB's perspective, we are, as always, looking for emission reduction, so anywhere where we can find additional emission reductions or improve the program, I think that would be a positive outcome.

CHAIR WEISSER: Well, a great question and a great answer. What I'm gonna suggest is that it would be desirable for you to, if you could, Sylvia, I mean if ARB could, kind of write up a - something that we could post on our website, we could send out through an ET blast, whatever, that - you know, to formalize what sort of input you want. Just what you've said to us. You know, the sorts of questions that you are welcoming from the public and from this Committee. I think it would be helpful to make sure that we communicate that very clearly, the scope of input desired. Jude?

MEMBER LAMARE: Thank you, Mr. Chairman. Jeff mentioned the overwhelming database and my thought in looking at this is can't we isolate and work down to a more meaningful level than Statewide Smog Check when ask these questions. When this Committee looked at it's Consumer Survey last year, we found that there were significant variations by air basin and the program probably works differently in different air basins. There are a number of reasons for that, including cultural differences within the State. And I think that at this point, trying to narrow down and get meaningful conclusions will require the State to narrow it's geographic focus somewhat and try to limit the number of variables under analysis by looking at a few places in the State. For example, Los Angeles, Fresno, San Jose. Something manageable, where you've got so many vehicles going through

the program, recognizing that we really would prefer to look at the 10 percent of the vehicles that are the worst performing vehicles on the road and not simply be getting information about marginal fails by vehicles that are, say, you know, in the ‘90s. Why not look just at ‘76 to ‘90 vehicles or ‘89 vehicles? Why not look specifically at the top 10 percent, well mostly like to fail or high-emitting vehicles, and how they move through the Smog Check system and what the differences are between some major air basins. So, if indeed, there are statistically significant differences in what happens to such a vehicle in Los Angeles compared to San Diego compared to Fresno that the Bureau might then focus more attention on problem areas rather than vague general manifestos to the State as a whole. Thank you.

CHAIR WEISSER: I - are there any other comments from Members? Couple of – couple of things. We need to figure out, Rocky, how we’re gonna organize the Committee’s response to this request for information and I’m not sure what the best mechanism is, but it would seem to me that as a starting point, you’re gonna want to send out some sort of solicitation for input from the Committee so we can get issues like Jude or Mr. Pearman or others have raised, we can start getting those down on a list and then, of course, in our next meeting, we’ll have an opportunity to talk about

it. And then following that, we would be able to submit something in writing to Sylvia and company. I'm not sure there's a - what? Well, what do you suggest, Jude?

MEMBER LAMARE: Sylvia started her comment by saying she would like individuals to comment in writing to her before the next IMRC meeting. This isn't something where we as an IMRC - as I understand it, as an IMRC, we don't have to agree on our comments -

CHAIR WEISSER: No. Okay.

MEMBER LAMARE: - it's just input.

CHAIR WEISSER: So it's a free-for-all. Very good, fine. We can do that. I think it would be desirable for Members of the Committee to copy others Members of the Committee as to what they're putting in, unless they, for one reason or another, feel uncomfortable in doing that, I would urge we send a copy of our comments to Sylvia, to Rocky, who can distribute them to the rest of the Committee. I'm just gonna make a recommendation that you consider asking the consultant to occasionally translate their findings in terms of the numbers that spin out in tons per day to compare those to easily understood other comparable numbers. What I'm thinking specifically is under - any one of these questions might result in a savings of X number of tons per day. It would be helpful for the decision-makers in the legislature and the Administration and people who provide

advice like Members of this Committee to understand the relative size of that emission reduction. Compare it to something that we know. Like the emission reductions we lost when the legislature extended the exemption from four to six years. Emission reductions that were foregoing because we don't have an annual inspection for cars 15 years and older. Some comparable terms, I think, would be helpful to decision-makers.

MS. MORROW: Well, one of the things, Vic, is that, you know, we do have a column in here that talks about the potential emissions impact and right now we just have a description, you know, low, moderate, and high and that's because many times, you know, you have an idea of what may be out there that are lost emissions, but until you actually do the analysis, you don't actually know what the actual tonnage is with -

CHAIR WEISSER: I understand. No, I'm talking about after, you know, in the - after the analysis is done. When you prepare a summary report, if you just toss numbers out to folks, they don't get it as readily, necessarily, as readily as they might if you compare it against something that they can judge in a relative sense. Now, I pick the two things that I happened to chose because they represent issues where I think the State is missing, you know, a wonderful opportunity for emission reductions. And things that you've

recommended and that we've supported, so I would think you might want to - anyhow, that's my biases. Any other comments or questions? Okay, we'll take some public comment, then, Bud?

MR. RICE: Good morning. My apologies for being a little tardy this morning. First comment, Rocky, you're looking good in that little -

CHAIR WEISSER: You're way too late for that.

MR. RICE: All right. First comment I wanted to make was as – as you look at what was displayed on the screen, the topics look great, kind of like what you were saying, Jeffrey, the topics look great and as you're going down that list, you go, well that make sense, well that makes sense. My only comment would be that those things don't happen in isolation. Okay. They don't happen in isolation. I kinda look at this as if going back to the old school days, we're kind of on a - not just a two-seater teeter-totter, but we're on a four-seater teeter-totter, okay. And the four seats are the air, the public, the service providers, and the policy makers and we're all sitting on this teeter-totter kind of moving around a little bit and as something comes up on the list, you almost have to use a measuring stick of what happens to the teeter-totter. All right, because what – what would be really good for the air is we all stop driving cars. Well, the teeter-totter's gonna tilt

one way, great for the air, the public's not gonna put up with that, service providers are gonna be squawking and the policy-makers are gonna get voted out of office, so that doesn't work. So you have to have something on the list that when you say, yeah, let's go attack that one, you've gotta think about what happens to the four-seater teeter-totter because it has to work all the way around the horn or you got problems. Thank you.

CHAIR WEISSER: Thanks, Bud. Are there other comments from the public? Mr. Ward?

MR. WARD: (inaudible)

CHAIR WEISSER: On the - the question was, for those of you who were listening and couldn't hear the question, and the question came from Randy Ward - is the listing of potential areas of analysis prepared by the ARB going to be on the IMRC website and our Executive Officer, Rocky Carlisle, nodded his head up and down indicating affirmatively it would be. Sylvia just charged up here, so what do you have to say to that?

MS. MORROW: I will transmit a copy of the table to Rocky to make sure that it is placed on your website.

CHAIR WEISSER: Very good. Any other public comments? Mr. Peters?

MR. PETERS: Charlie Peters, Clean Air Performance Professionals, which is a coalition of motorists. Back in

‘94, we presented to the Committee some questions about where we’re at and where we’re going. We’ve never gotten any answers to those and about the possibility of having an audit system to find out what’s really going on here. I’m going back here to an October ‘93 letter, which has been provided to the Committee on numerous occasions to Mr. Jim Shoening , Chief of the Bureau of Automotive Repair concerning a meeting that took place with the Bureau of Automotive Repair, oil companies, automotive repair associations, garage owners, mechanics. An agreement to do a pilot study to find out if, in fact, we could implement a policy that would improve performance. Everybody in the meeting agreed that there were huge opportunities to improve. The meeting went on for some time deciding on how we were going to analyze what we needed to do and where the problems were and where they weren’t and so on and so forth. We - a number of people in that meeting said, no, we want to do something to see if we can change behavior and improve performance and improve how the public is treated and improve how the system works. Now, there was an agreement to start that pilot study within 45 days. We’re still waiting for that. Specific things that has an ability of evaluating what is going on and whether or not policies can be improved was provided in a letter from Quality Tune-Up to the legislature and has been provided on numerous occasions

to this Committee, dated February 8th, '94, with specific polices to evaluate and measure improvements in performance with improved oversight. We don't seem to be interested to you, Committee, here in my humble opinion, don't seem to be much interested in anything other than trying to move boxes around rather than better serve the public and take care of the air. When I provide to you evidence with a Memo from the Air Resources Board that 1.43 million daily rental trucks with out-of-State plates run around the State of California, none of them ever gets a Smog Check anywhere in the country and you say we can't find any low-hanging fruit when you have consumers with cars running around with out-of-State plates, with plates that are registered in zip codes that don't require it, you do surveys and you don't find out whether - do a comprehensive survey to find out what those cars are, it certainly calls into question what this Committee is about and where it's really trying to go and it doesn't appear to me to be - to match the rhetoric. Thank you.

CHAIR WEISSER: Thank you, Mr. Peters. What I would urge you to do is to summarize the issues you think need to be looked at and to send those in to us or to the ARB and we will transfer - you should give then an opportunity to consider your suggestions made as early as '94 or before once again.

MR. PETERS: I provided that to the Committee and the Committee removed every one of them with the exception of the one that has been considered by -

CHAIR WEISSER: Thank you, Mr. Peters. What I'm - I will suggest that you take this opportunity to provide the ARB with input at this opportunity. Thank you. Are there any other comments from the public? Okay. This item is concluded now. A Committee Member whose name will go unmentioned has demanded a 10-minute bio-break, so we're gonna recess for 10 minutes starting now. Thank you.

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CHAIR WEISSER: Okay, the meeting is now back in session. We will now proceed to a presentation from Sierra Research – Mr. Phil Heirigs. Did I butcher the name, Phil?

MR. HEIRIGS: Actually, you got pretty close. It's actually with an S on the end, though – Heirigs.

CHAIR WEISSER: Well, I will fire the Executive Officer of the-

MR. HEIRIGS: Believe me, I have seen that spelled many, many different ways.

CHAIR WEISSER: All the nice things we said to you, Rocky, are now deleted from the record.

MR. HEIRIGS: Quite all right. Believe me, I've had it spelled different ways and pronounced many different ways. Again, my name is Phil Heirigs. I'm with Sierra Research. I've been with Sierra for probably close to fourteen years now.

Before that, I was at the Air Resources Board for almost seven years primarily doing automotive emissions data analysis and those kinds of projects. Since this is my first time before the IMRC, I thought I'd give you that sort of brief history of my background. This particular presentation today I was asked to give to hopefully clarify some of the specifics related to a more stringent ASM cut-points analysis that we had done about a year or so ago, I think, when the bulk of the effort was actually completed. In the presentation, a lot of times we refer to as - these cut-points as vehicle-specific cut-points. That's kind of a misnomer. It's really vehicle groups specific cut-points. I mean, we're not gonna have 13 or 20 or 30 million different cut-points, but it's more vehicle group specific cut-points. Okay, right click. Rocky, one more. There we go. So the goal here was to one, look at more stringent ASM cut-points, but more importantly to develop those or try to develop those cut-points that - in such a manner that would maximize the identification of vehicles with identifiable or significant emission control system defects while minimizing false failures. I mean, it doesn't do much good to lower, you know, all cut-points by 90 percent and be real happy that your emissions benefits go up when, in fact, you end up falsely failing vehicles that just, you know, nothing is wrong with them and in the field would be difficult to deal

with. So that was the goal. And just by way of background and a refresher here, note that the ASM test measures emissions at basically two different speed load points. You've got 15 miles an hour and 25 miles an hour. Slightly different loads apply to those two test points. One of the concerns about the ASM, although it's a whole lot better than the TSI, is there may be certain vehicles, vehicle types, that those two points may not accurately represent what's going on in stop-and-go driving. So, we were given this task of okay, we have the ASM test. It's a whole lot better than a two-speed idle test, but we want to do something with the cut-points here, how can we improve our confidence that if we go with more stringent ASM cut-points that we can identify defects that result in elevated emissions over a broader range of driving conditions. And on the flip side, how do we identify those vehicles where we shouldn't do anything to the cut-points. So, it's sort of a two - kind of a two-pronged approach here. We want to identify those vehicles that would benefit from more stringent cut-points and vehicles that wouldn't, obviously we want to leave those alone. So our general approach was to compare the ASM failure rates in California to failure rates in states that are running transient emissions tests, and that would be either the IM147 and the IM240 tests. The IM147 test is sort of a subset of the IM240. The IM240 is a

subset of the federal test procedure used to certify vehicles federally and in California. Therefore, you get a very good correlation between these transient tests and the federal test procedure and as it happens, the federal test procedure actually is a very good representation of emissions over sort of standard customer service. So, what we looked at and what we were hoping to see is that vehicles that - with higher ASM failure rates compared to the IM147 and the IM240 failure rates, those vehicles we want to leave alone and what we really targeted were those vehicles that have low ASM failure rates in California compared to some of the failure rates that we saw in Arizona for the IM147 test and then the Wisconsin program for the IM240 test. And I preface this by noting although we call these vehicle specific cut-points, they're really vehicle groups. And so what we did is we segregated the data by model year and note that we just looked at pre-1996 model year for a couple reasons. Primarily, there aren't a lot of data on transient tests for 1996 and newer vehicles and the reason why is most programs have opted to do an OBD-only test on those vehicles. So, we didn't really have the data to do '96 and newer, so we just left this at pre-96 model years, we then broke the data down by manufacturer. For example, General Motors or Toyota. We broke it down by make, so your GM would go into sort of, you know, Chevrolet or Pontiac. Your

Toyota would go into say, Lexus or Scion or Toyota. We looked at models and then once we had it at that level, we looked at engine displacement, number of cylinders and then transmission type. On engine displacement and number of cylinders, we probably could have used one or the other and probably would have been at the same place, but we did break it down to that level. In many cases, if we had small sample sizes, we sort of segregated up from this ideal level of de-segregation, if you will. For example - and we came up with this number - sample size, sort of bogey at vehicles less than 50. So, if we had less than 50 in a group, we'd go up from there. For example, the example I gave here is you might have a Dodge Aries and a Dodge Shadow, both with four-cylinder 2.2 liter engine with an automatic transmission. We'd combine those and so to get over that 50 mark and we wanted to have at least 50 vehicles in each program. And so once we segregate this data by model year and engine type, make, model, we looked at the failure rates that were observed in California versus those failures that we saw in Arizona and Wisconsin and this appears to have shifted - I apologize for this table. It shifted over a bit, but in this example, we're looking at 1992, 3.1 liter, 6 cylinder, automatic transmission, Pontiac. And so, if we look at the failure rates in California for that vehicle group, we see that the failure rate is 10.7 percent. Now

the model year average for that group, and if this was lined up the way it's supposed to be, this is going to be the model year failure rate here, and so in California we see that this vehicle group has about 11 percent failure rate, but the model year average as a whole is about 19 percent. And so we then sort of divided one by the other to get a, what we'll call a normalized failure rate, so we've got lower than average failure rate for this vehicle group in California, and yet when we look at the Arizona and the Wisconsin data, which are running transient tests, we see that the failure rate for this vehicle group in Arizona is almost 27 percent while the model year average is about 16 percent, so it's higher than average in that program. It's higher than average in the Wisconsin program. And that's kind of what we were looking at. If a vehicle showed a lower than average failure rate in California program and a higher than average failure rate in Arizona and Wisconsin over the transient test, we would flag those, basically, for further evaluation. And we developed this term, Relative Failure Ratios, and all that represents is sort of these normalized failure rates that we saw in California divided by those normalized failure rates in Arizona and Wisconsin. This may be a little bit confusing, but just think of this as - for these Relative Failure Ratios, a low number, say less than one, means that we're seeing fewer failures in

California on average than we see in Arizona and Wisconsin. A high number here, over one, means we're seeing more failures in California than we saw in Arizona and Wisconsin, therefore, vehicles with a low number here are candidates for tighter standards. Vehicles with high numbers here, we want to leave them alone. And this next table is admittedly very messy, but it gives you an idea of the types of candidates that we might see to apply for - or apply more stringent ASM cut-points. And here, I've just listed 1992 model year. When I do these kinds of analyses, and especially stepping through examples, I like to sort of focus on a single model or a single model year to make it a little bit more manageable. And here we see that, you know, we've got the - all vehicles at the top and that's the model/year average and then we've got specific vehicles in this group and you can see, these are all on the low end of this relative failure ratio. That is, they are experiencing lower failure rates in California versus what is observed in Arizona and Wisconsin. And one of the reasons why we went with failure rates, and I'll explain this a little bit later, too, is these programs have different cut-points applied to the I/M programs and so we felt like if we just looked at failure rates and we compared those failure rates to the same model year, in a particular area, or particular

program, we'd get a good sense of how that vehicle group faired, compared to the average.

CHAIR WEISSER: Let me - if I might just interject one question. And I'm trying to hold off until the end, failing once again. The cars that are sold in Arizona and Wisconsin are equipped identically to the cars, that same model, that's sold in California?

MR. HEIRIGS: No, and in fact, I have a slide coming up on that if you'd like. I mean, basically there - that was one - I wasn't at the last IMRC meeting where this was discussed, but my understanding is that was one of the concerns that there may be different standards applied to vehicles out-of-state versus in-state and give me about three slides and we'll address that. So if we look here, I think - where'd it go? We were showing - here it is. The 3.1 liter Pontiac, that was the one that we just looked at the specific numbers where we see that that's lower failure rate in California versus Arizona and Wisconsin, especially compared to the model year average failure rates. That shows up here. And then there are some others and when all is said and done, you know, across all model years, you're in the maybe low tens of thousands in terms of different vehicle groups, so it's quite a few different vehicle groups that we end up looking at. So, once we identify these vehicles that are, what we consider candidates for cut-

points changes, the next question is well, gee, how much do we reduce the cut-points by? And I - what was at first suggested is we could take after-repair data from vehicles that had failed and then been repaired to pass, take the ASM data, take the 90th percentile and say okay, we're gonna set that as our after-repair cut-point. The problem is, when you start looking at those data is you run into issues with the fast-pass algorithm that's implemented in California, where once you start looking at the data, you see a whole lot of records right at the cut-point level for certain pollutants, you know, typically HC and NOX will be right at the cut-point level, CO typically will be a bit below because remember the way the fast-pass works is once all three pollutants are below the cut-point, we're out of that mode and into the next. So, looking at - directly at emissions data, Smog Check data, it didn't make any sense and so one of the guys working on this kind of came up with this idea of looking at the cleanest 25 percent of the vehicles and so we looked at the passing vehicle ASM scores and they were presented as a fraction of the current cut-point. And we said, okay, let's look at the cleanest 25 percent and what that tells us for vehicles that have a low score and as clean as 21 or the first cortile, you'll see this Q-1 designation up here, that suggests - and say it's 15 percent of the cut-point - that suggests that a properly

functioning vehicle meets the cut-points fairly - fairly readily. On the other hand, a high Q-1 score, if the cleanest 25 percent are still at 60 percent of the cut-point, it gets a little dicey in terms of suggesting, you know, wholesale changes to those cut-points. And so, we did this analysis in conjunction with the sort of relative failure rates to try to come up with a set of more stringent cut-points, where hopefully we're going to minimize the opportunity for false failures. And what we looked at were three different cut-point scenarios where these relative failure ratios were set at less than 1.5, less than 1.25, and then less than one, and then in all cases, we wanted these Q-1 scores, or those cleanest 25 percent to be roughly 50 percent - or below 50 percent of the cut-point. So we sort of established that as our three scenarios. And the other thing that we were working with here is we applied a maximum reduction of 30 percent in the cut-point level and that was based on a review of the California Code of Regulations that BAR had done that indicated that's the maximum cut-points could be changed without a change to the regulations. And so we sort of limited the cut-point change to a maximum 30% reduction. And so we took the current cut-points and then we just - for those vehicles that qualified, based on the relative failure ratios or failure rates, we just reduced those current cut-points by, you know, this

ratio of the Q-1 score over .5 or a maximum of .7 and so, essentially, what that means is if the Q-1 score is less than .5, you leave it alone, you don't do anything. If the Q-1 score is between .35 and .5, it's kind of this linear ratio between a 30 percent reduction and zero percent reduction and if the Q-1 score is below .35, then you get this maximum 30 percent reduction. And it's sort of confusing to see this for the first time. It's described in the report and I think there are copies of the report on the back table. So here's one the concerns was the use of non-California data. And the fact that there can be different emission standards between the California fleet and what we see in Arizona and Wisconsin. And that's true. Some of those groups may have been certified to slightly different standards. In our view, that's probably gonna have a minimal impact, primarily, because many of the engines in vehicles in this timeframe were equipped with 50-state engine families. I mean, it makes a lot of sense for a manufacturer if they can meet both California and Federal standards. They save a lot of money in certification costs if they just certify to 50-state standards and so most of the vehicles in this group, if it was a 50-state standard, for example, would have met the .41 gram per mile, HC standard or .39 non-methane hydrocarbon standard. They would have met the more stringent between the 7 gram and 3.4

gram per mile CO standard so that they would be at 3.4 and then they would meet the more stringent of the 1 gram Federal standard or .7 gram per mile NOX standard, so it would be .7 NOX. And there are a number of vehicles in quite a few groups that actually did that. Because it just saves money on certification fees for manufacturers. Another point to consider is that the age of the vehicles analyzed here make vehicle migration more likely. And so you've got this big pot that consists of all the states and you throw new vehicles into this pot depending upon which state and then you start mixing it up as time goes on. And this issue of migration was actually studied pretty carefully in the mid-90s timeframe to sort of argue for the National Low Emission Vehicle Program that is, if you go with an NLEV Program, ultimately you're going to see benefits in California, you know, as well as other states. And then, finally, we did this analysis based on relative failure rates and our hope is that mitigates somewhat the differences in standards and as a practical matter, when you're looking at the difference in the certification standards for these model years, say '81 to about '94, they're not huge, I mean, especially say the '81 to sort of late '80s. You've got slight difference in NOX, slightly more stringent in California, you've got a little bit difference in CO, higher in California, but as a practical

matter, the HC standard's really kind of kept those seal levels under control. So, I guess, personally, I'm not that concerned about the use of non-California data because of these different points. Now, the other issue that came up and again, a valid issue, is are we just targeting marginal emitters when we do something like this. You know, clearly, we're not after, you know, vehicles that are just barely failing their FTP standards. What we'd ideally like to do is be able to pull more high emitters into this group and so what we did, and actually, I did this just in the last couple of weeks because it's not something I had done for the report, but it was really to look at the database that I had used to do the emissions analysis with, which is an ARB surveillance dataset that has matching FTP and ASM tests, as well as after-repair data. So, I sort of leached through that to figure out, okay, which vehicles am I capturing with each of the three cut-point scenarios and what that shows and the next slide is real messy as well, but I think it has some good information in it. We were able to successfully identify high-emitting vehicles with this approach to establish tighter cut-points. And again, I apologize for how many numbers - I think I learned in college that you weren't supposed to have more than 20 words per page and I exceeded it here. What we see here, the first 1, 2, 3, 4, 5, 6 columns are the vehicle identifiers, so these are the

vehicle-specific groups, if you will. The next columns are failures with the three different scenarios that we evaluated where a one is yes and if it's blank, it wouldn't have failed. So you can see what I did is I pulled all of the failures for, you know, less than one and a half relative failure ratios and then what happens if you sort of decrease that particular parameter, because those were the three cut-point scenarios we evaluated, and then the last three columns show the multiple of the FTP standards and you can see - and so vehicles with more than one times the FTP standard, you know, you can arguably say look, you could probably do something with that vehicle. Honestly I'd like to see two to three on all of these, and in many, we do see two to three times. The best for, you know, in terms of what we were able to identify with these cut-points is about - I keep forgetting I've got this pointer here, is this Honda Accord here where we see that with two of the three cut-point scenarios, we identify that car as a failure and, you know, that thing was up over four grams per mile HC, it was over 80 grams per mile CO and so, that's a real success story and honestly I'd like to show you a chart that's full of those. You're not gonna see it. It's like the nature of emissions data. But you've seen a lot of high twos and threes, which to me is very encouraging. But on the flip side, we see there's a couple down here that are actually at

or below the standard for all pollutants and there's our errors of commission. And anytime you make a cut-point change where you're going to make the cut-points more stringent, you're gonna have to live with some number of errors of commission, it's the nature of the short test. I mean, if we could spend $1,000 or $2,000 per vehicle per year to run an FTP, we'd know for sure. But we can't do that. So, you see a couple of vehicles in here where we're off the mark, but then we see real big success on some others. So, that kind of gives you an idea of how well this approach worked to identify high-emitting vehicles and it wasn't only, you know, just the marginals that are caught with this approach. So, once we completed our three different cut-point scenarios, we were tasked with, okay, what's it gonna do with the failure rates observed in use? I mentioned earlier that sort of the problem with fast-pass that if you look at tighter standards, you really can't tell what's gonna happen because you don't have full duration scores, so what we had to do as we went to roadside data and I can't remember how many records we had, probably not quite 20 but over 10,000, so we had a set of - a decent set of roadside records that were full-duration scores. We generated sort of the difference in failure rates based on the current scenario, current cut-points in our three different scenarios. We did it by model year group and then

we kind of applied those ratios to the Smog Check data with, you know, many millions of records. This was done in the April to June 2004 timeframe in terms of the Smog Check data. So that would be if we implemented this, you know, two years ago, this is what we'd see. As we go out in time, the difference in the increase in failure rate's not going to be as large because we're going to have fewer vehicles in this, you know, pre-90 (static in recording) so, you know, that delta in failure rate it will go down in the future. And you can see, you know, scenario one which is the most stringent. The failure rate went up by 2.4 percent from 10.4 to 2.8 and slightly less for the other two scenarios. The impact on Statewide raw plus NOX emissions, and I wish I had a good comparison point here, these are in terms of tons per day, and this is for calendar year 2010, so we've forecasted this to 2010 and then we've used, in fact, 2002 to generate these estimates for enhanced areas of the State, so it's not - it's for enhanced areas that are running ASM tests and you can see the different scenarios give you between 5.5 and 7.8 tons per day of raw plus NOX reduction, which, you know, honestly, is on the level of the sort of reductions that many of ARB's, you know, current control strategies are sort of aimed at. I think the days of getting 50 to 100 tons per day raw plus NOX are pretty much gone and for a relative small tweak, of course, from my

perspective it's a small tweak, because I just crunch the numbers here, but for a relatively small tweak in these cut-points we - you're getting a decent benefit. So that's all I have and I'd be glad to answer any questions.

CHAIR WEISSER: Did you - do you have any cost-effectiveness numbers (overlapping)?

MALE: They are presented in the report and I can't remember what it is on the top - the top of my head. I think on the order of $7,500 per ton.

CHAIR WEISSER: So it's -

MALE: So it's not, yeah, it's not out of line. They're in the report, though.

CHAIR WEISSER: Well, I'm sure there are lots of questions. I'll start from my far left, appropriately occupied by Jude Lamare.

MEMBER LAMARE: Thank you, Mr. Chairman. No questions. I think this report really helped clarify the study. But, I would just add that in terms of the emission - the significance of the emission reductions relative to the cost and the cost of implementation I think is much more significant than presented today and certainly just the 2007, 8, and 9 emissions are very, very important to our State in reducing air pollution impacts that the level of - that 2010 emissions is important for air quality planning and it's kind of a standard and we like to use that so that we're

talking apples and apples, but I wouldn't urge this change be made immediately, as quickly as possible, to get those tons that are there now, 2006, 7, 8, 9, obviously larger numbers than 2010 numbers and they're very important. Thank you.

MR. HEIRIGS: Just as a sort of relative, in terms of relative terms, that's - the 7.8 in 6, 7, 8 is about two percent of the gasoline vehicle inventory. So you're looking at about two percent reduction from, you know, that group of vehicles.

CHAIR WEISSER: Thank you. Roger?

MEMBER NICKEY: This is probably more of a comment than a question, but we keep, we have focused on tailpipe emissions, we have two other emission systems on the vehicle to deal with. We have evaporative, we also have crankcase. How do you deal with failures that - vehicles that are relatively low exhaust emissions and hardly ever fail exhaust emissions test, but have a higher likelihood of failing, say crankcase?

MR. HEIRIGS: You know, that's a good question because I guess that's something we could - we didn't look at that. But -

MEMBER NICKEY: Just -

MR. HEIRIGS: It is, it's a - that's a very valid point, especially when you start looking at sort at that group of vehicles that we targeted here which, you know, all of them

'81 to '90 in that range, which are getting to the age where you're gonna see a lot of evap problems. So, and I'm trying to think out loud a little bit. I guess you could do that kind of analysis looking at some of the Arizona data where they've been running the low pressure evap test for many years there. But we didn't target it here.

MEMBER NICKEY: Yeah, I'm not talking about evap so much as I am crankcase and I can cite, just for example, later model Fords, 5.4, very low tailpipe emissions, but they have a lot of PCV failures because they have a particular hose in one particular place that manages to suck itself shut, which shuts off the whole crankcase vent system, which negates the whole process. Chrysler products have low tailpipe emissions, but a real high likelihood of failing crankcase because they break their hoses because of whatever reason.

MR. HEIRIGS: Yeah, that's a good point. We didn't consider it and crankcase is a big deal. Maybe not on a fleet-wide basis, but certainly on a gram per mile basis, because 4.68 grams per mile, depending on what side is disconnected and the size of the engine and things.

MEMBER NICKEY: How does a crankcase failure affect the figures that you have here?

MR. HEIRIGS: It wouldn't.

MEMBER NICKEY: Are you considering a fail of fail or just tailpipe failure?

MR. HEIRIGS: We just looked at tailpipe failures.
CHAIR WEISSER: But this might be something, Roger, that you might want to mention in your comments regarding the future contract.
MR. HEIRIGS: Certainly, yeah, certainly on the task list, add that. Because I hadn't thought about that. That's a good idea.
CHAIR WEISSER: Jeffrey?
MEMBER WILLIAMS: I'd like a clarification about the comparison among the three states. I accept your reasons for saying that it's a valid comparison, but I worry about one other, which concerns the surviving cars in the three states. Imagine a situation where this particular Pontiac just didn't get driven very much typically in California and it got driven a lot in Wisconsin, you would expect, just as a function of mileage, that the failure rate would be lower in California. It's about the composition of the two Pontiac fleets. Did you compare that?
MR. HEIRIGS: We did look at that. That'd be reasonably easy to do. Most, I know Arizona's got odometer, I know California has odometer, I believe Wisconsin has odometer. That'd be fairly easy analysis to do.
MEMBER WILLIAMS: Yeah, I'm concerned you didn't do that.
MR. HEIRIGS: Yeah, but you know, once we start look - once we go ahead in time, what I've seen, I've looked at odometer

data quite a lot in various I/M programs and inevitably what I see is you get this increase that you'd expect as vehicles age until you hit about 15 years, then it just like levels off at about 150,000 miles. And what's happening, I believe, is that vehicles that get driven a lot when they're new, they're not out there by the time you get to 10, 12, 15 years old. And so, my expectation is we probably see something similar here. But, we could do that analysis.

CHAIR WEISSER: Okay. I'm not sure what the implications are, Jeffrey, of your question.

MEMBER WILLIAMS: (unclear)

CHAIR WEISSER: Okay. We'll go to Dennis.

MEMBER DECOTA: I can't help but notice the differential in failure rates between California, Arizona, and Wisconsin.

MR. HEIRIGS: For some vehicle groups.

MEMBER DECOTA: For some vehicles, but they're - they're large.

MR. HEIRIGS: Absolutely. You know -

MEMBER DECOTA: Why?

MR. HEIRIGS: Well - okay, the theory is that we're working off of is that potentially, the ASM, because you're looking at two-speed-load points, you're not capturing sort of the complete range of driving. You're not capturing the complete range of driving in an IM147 test, you're not in an IM240 test, but you're getting closer, okay. So one thing that you're certainly getting with the IM147 and the IM240

is transient operation. You're not getting that with the ASM. The other thing you're getting is decells. You're not getting that with -

CHAIR WEISSER: De -

MR. HEIRIGS: Decelerations.

MEMBER DECOTA: Right.

CHAIR WEISSER: Thank you.

MR. HEIRIGS: You're not getting that with an ASM test. I mean, if you've got a problem with fuel shut-off with decell, you would see that in an IM240 - IM147, you wouldn't see that in an ASM. And so the thought is that's one of the things that's going on. It's just their different test cycles and there may - at least in my view and I think in a lot of people's view, the IM147, the IM240 test is a better representation of on-road driving than a two-point test with the ASM. It just is.

MEMBER DECOTA: What about the actual fuel make-up of Wisconsin and Arizona as compared to California?

MR. HEIRIGS: Yeah, the hope is that we get around that a little bit. And you're right, they're gonna be different, they've got different seasons, I mean, we took a two-year chunk of data, so we're seeing winter, summer, whatever. But, the hope is by looking at kind of the relative failures, within each program we look at kind of a model year average and we use that kind of as the denominator in each of the program

area of failure rates, okay. And so, our hope was by looking at the failure rates compared to a model year average in each program, we're hopefully getting around these differences in fuels and temperatures and things.

MEMBER DECOTA: Could it also be a factor that just opposite of Dr. Williams' suggestion was more miles driven would have a tendency to reduce emission in failure points versus a car that was not in Arizona or Wisconsin driven as much as a car in California?

MR. HEIRIGS: I'm disinclined to go with that. A real smart guy said one time - I don't know if you guys know Harold Haskew (phonetic) but he's an ex-GM engineer. He was there for 40 years. He's consulting now, he does work for CARB and others and I remember sitting in a meeting, real - very similar to this and his point was, look, it's how much fuel you push through the inch and how much exhaust you push over the catalyst and I kinda, I have a sense he's right.

MEMBER DECOTA: I would agree. The vehicles that are on your list in California currently would most likely be direct test-only, only.

MR. HEIRIGS: Yeah, could very well be.

MEMBER DECOTA: And including all those makes and models on that year. Are we comparing apples to apples in the way that -

MR. HEIRIGS: You know, it's impossible. I mean we're comparing data from different programs, so we may not be precisely

comparing apples to apples, but certainly we're getting darn close, I think.

MEMBER DECOTA: Thank you.

CHAIR WEISSER: Mr. Pearman?

MEMBER PEARMAN: First, when you talk about the use of non-California data and that the survey vehicles were equipped with 50-state engine families, what does that say about whether they have the same emissions controls?

MR. HEIRIGS: Well, okay, I apologize. I should have explained that a little bit more thoroughly. In (static in recording) - I saw Mike back here, he can correct me if I'm wrong, but I think I had this right. The Air Resources Board does what they call sort of routine surveillance programs and what that means is they send a bunch of letters out to folks in the Southern California area and say look, please give us our car for a week, let's say. And while we've got your car, we're gonna subject it to a series of tests, we'll give you a rental, we'll give you whatever, $50, $100, whatever the incentive is. And so they get these vehicles from customer service and they tell folks in this letter, look, if you've tampered with your vehicle, no big deal. Okay, we're not gonna do anything, you know, we just wanna see, we're doing a study of in-use emissions, we really need to see your vehicle in its sort of standard state, if you will. And so they get these vehicles in from the community,

essentially, in Southern California. They take them to El Monte, sometimes they'll contract this work out, but they'll take them to the El Monte lab, they'll put them through a series of tests and the tests I was looking at included a baseline ASM test, where they stick it on a dyno, run the ASM test, as well as federal test procedure tests so that you've got the full, you know, 24 to 48 hour soak, you're running at a very tight window in terms of temperature, you're following, you know, the 1300.05 LA-4 speed time trace, you've got all these very standardized tests you're running, but then what I was very interested in was that, as well as this ASM - matching ASM. And so, these surveillance projects are intended to get a picture of how the fleet is operating in customer service. And so it's not a roadside pullover. It's much more extensive that than and, like I say, and then vehicles that fail a certain set of cut-points may get repair, may be retested to see, okay, what are the benefits of repair if we have sort of this set of cut-points.

MEMBER PEARMAN: Well, along that line, you had taken great pains to make sure the category of groups you looked at had at least 50 vehicles, but the surveillance data might have had one, two - 50 - what?

MR. HEIRIGS: Yeah, they're if I - and the numbers are in the report. If I remember right, I probably had 500 or 600

vehicles. There's just - that's the one thing that - where you're really hamstrung by data. I mean, there's just not a lot of FTP data available because it is so expensive to collect. And so you sort of do the best with what you've got.

MEMBER PEARMAN: And then the chart where you had the vehicle categories and the relative year failure rates and you compare those to the results of the surveillance data and you had like the highest ones, less than 1.5, etcetera. Did you do the reverse correlation? Would there be any value in looking at the failure rate to be viewed from the surveillance data and then running across to see where they match up with these vehicles that were grouped like that?

MR. HEIRIGS: No, I didn't. No, that's a good point. I did not do that.

MEMBER PEARMAN: And the other, if you could just comment on one thing, you indicated that the high Q-1 score, 60 percent of the cut-point was dicey, but then in your scenarios, you went with less than 0.5, which means 49 percent, so why would 60 percent be dicey, but 49 percent is not dicey?

MR. HEIRIGS: You know, it's kind of a judgment call. We really felt like - and if it was 49 percent, that adjustment would have only been, what, 30 percent over 2, so what is that, like a couple percent? So, because we didn't just say, okay, we're gonna reduce everything by 30 percent. If

you're between say that .49 level and down to .35, it sort of went linearly between sort of a zero percent reduction and the maximum of 30 percent.

MEMBER PEARMAN: Okay. Thank you.

CHAIR WEISSER: Great questions. Dennis?

MEMBER DECOTA: I need to help me understand something. You basically stated earlier that the decell test in Arizona and Wyoming could be some of the differentials -

MR. HEIRIGS: That's and example of -

MEMBER DECOTA: Of an example.

MR. HEIRIGS: - of the differences that you would see in sort of standard stop-and-go driving that you wouldn't capture in the ASM.

MEMBER DECOTA: Right.

MR. HEIRIGS: It's purely intended as an example.

MEMBER DECOTA: Okay. In your opinion, if these vehicles were tested with a two-speed idle under the ASM, would it help it make it more equivalent in the area of comparison?

MR. HEIRIGS: In my opinion, so you're asking me if we had a two-speed idle to the ASM would you have an improved performance?

MEMBER DECOTA: Would you have an improved tested - test methodology that may compare more equally in failure rates with the other two states?

MR. HEIRIGS: Yeah, I've look at that in other projects and yeah, I think it would. Adding a two-speed idle to the ASM, if you know, everything else being equal, there is benefit there.

MEMBER DECOTA: Thank you.

MEMBER NICKEY: Dennis, do you mean just the two-speed idle or idle?

CHAIR WEISSER: Roger - Roger, do you have a question?

MEMBER NICKEY: That's okay. Did you mean idle or two-speed idle?

MR. HEIRIGS: Two-speed idle.

MEMBER NICKEY: The whole two-speed idle test, not just the idle. I'm just curious.

MR. HEIRIGS: Yeah, on top of the ASM.

MEMBER NICKEY: Yes, sir.

MR. HEIRIGS: Yeah.

CHAIR WEISSER: Couple of silly questions from me. You indicate that gee, if you have failure rates that are substantially below that of these other states then we should be considering raising the cut-points, but you reject that reverse of that notion when we have failure rates considerably above the other states, you're not saying we reduce the cut-points.

MR. HEIRIGS: I mean, that's an option. Certainly that would potentially point to vehicles that may benefit from, you know, some loosening of cut-points.

CHAIR WEISSER: When I step back at this issue, I try to look at it in terms of the emission reductions we can gain through the investment of societal dollars, where, you know, wherever the dollars are coming from. And one of the questions that - or issues that I've heard over the years is that, you know, adjusting the cut-points marginally, you end up failing cars that on occasion are much more difficult to repair than cars that fail by a whole bunch. So you're relative cost-effectiveness is not quite as, necessarily, quite as good. Is that gonna be the case here?

MR. HEIRIGS: Well, that's why I presented the second messy table of the presentation to give a flavor of sort of what multiple of standards are these vehicles at that we're talking about that would be captured with this new set of cut-points. Mr. Pearman brings up a great point, it's - our dataset isn't real large on the FTP data, but - but they're a very good data. If we had a larger sample, we would, you know, may see much the same. But I think the Honda that I pointed out that was at 4 grams per mile HC and 80 grams per mile CO, I think that one could reasonably be repaired. Some of the others, especially the ones that - that were right near their FTP standards, those are gonna be

difficult. And that's - I don't care what set of cut-points you decide upon or a program decides upon, you're gonna see both ends of that spectrum.

CHAIR WEISSER: Well, it raises the question to me whether as a society we're better off investing resources to try to get at these marginal failures versus the focus of resources to get at the - that Honda. How much of the benefit in terms of emission reductions that you project that you'd get from these - this tightening comes from that Honda -

MR. HEIRIGS: Versus -

CHAIR WEISSER: - versus the 50 cars that fail by -

MR. HEIRIGS: Right.

CHAIR WEISSER: - a marginal amount.

MR. HEIRIGS: And any time you can capture either a few high-emitters, you're gonna do much better than if you're getting, you know, vehicles that are two or three times the standard. Although, even vehicles that are two to three times the standard likely have identifiable defects. It - a lot of times, and one of the reasons why I got up earlier and sort of this plea for more data is, you know, we don't know precisely. We're doing the best with the 500 or 600 vehicles we have in the surveillance data, which is probably the best for this purpose in the world.

CHAIR WEISSER: Yeah.

MR. HEIRIGS: And in order to sort of sharpen your pencil more, you need to collect more data.
CHAIR WEISSER: Well -
MR. HEIRIGS: And I think that's something that the Air Resources Board is sort of committed to do in terms of analysis task that Ms. Morrow had presented earlier.
CHAIR WEISSER: Now, your projection of the emission reductions, obviously, would include the gross emitters that you catch -
MR. HEIRIGS: Right and that Honda -
CHAIR WEISSER: - but they would be caught anyhow by the existing system, wouldn't they?
MR. HEIRIGS: That Honda wouldn't have.
CHAIR WEISSER: Not necessarily?
MR. HEIRIGS: That Honda wouldn't have.
CHAIR WEISSER: That Honda would not have?
MR. HEIRIGS: Would not have. Right.
CHAIR WEISSER: Okay.
MR. HEIRIGS: Because that's -
CHAIR WEISSER: Can you -
MR. HEIRIGS: All that's on that list are vehicles that were capture with this new set of cut-points.
CHAIR WEISSER: Okay.
MR. HEIRIGS: That were not captured with the current cut-points.

CHAIR WEISSER: Do you know, or can we ask someone from the Air Resources Board, what happens now about the study was submitted in July, where do things stand? Tom?

MS. MORROW: Sylvia Morrow with the California Air Resources Board. We actually have not gotten to that step yet as far as deciding or requesting that BAR implement that - more stringent cut-points because there are some other issues with it.

CHAIR WEISSER: What other issues are there that we should be think of?

MS. MORROW: There were questions, if you look at the report, I believe there were questions of is the VID and being able to store those extra cut-points and things like that and as you know, right now, BAR is undergoing a change as far as their - a new contractor that is gonna be - that has redesigned the VID and it will have different capacities, so we just have not reached that point of deciding whether to go through with this or not.

CHAIR WEISSER: Well, that’s a BAR implementation issue, but you haven’t crossed the threshold of deciding whether or not you’re gonna recommended heightening the cut-points, I presume regardless of BAR’s transition challenges right now; is that correct?

MS. MORROW: That’s correct.

CHAIR WEISSER: Why not?

MS. MORROW: I'd have to go check on that.
CHAIR WEISSER: Okay.
MS. MORROW: Okay.
CHAIR WEISSER: I'm just kinda curious as to where you stand. I once again want to get back to this notion of societal resources, you're talking $7,500 a ton, which is, you know, I think pretty much in the ball park in terms of relative cost-effectiveness. It's pretty good these days. But, as a society, would we be better spending that on this versus increased scrapage or you know, what other program options there are, I don't know. And I don't have any further questions. So, any others from the Committee? Are there questions from the public? Mr. Peters?
MR. PETERS: Mr. Chairman and Committee, my name is Charlie Peters, Clean Air Performance Professionals, a group of motorists that are interested in these issues. A lot of very interesting information. We have supported cars' specific cut-points to make the program as fair as possible to eliminate false failures and false passes for decades. In addition to that, and so, that review and those possibilities I think are very important. The comments by Committee Member Nickey, I think are very appropriate looking at significant potential emissions generating from other systems that are not measured by the tailpipe test and however, there may be some subject matter here that's not

being discussed that you certainly brought out that may add some additional fuel to your consideration and that is all of this data is comparing the standard that the car is required to meet when it's manufactured, which, if a very small percentage of the cars fall out of - fall below that standard, the whole fleet has to be recalled, so the actual amount of emissions from the fleet of cars may very well be considerably less than what is being used as a basis for this discussion. And you have a huge amount of vehicles which are being possibly brought in to compliance with the tailpipe emission standard where, if in fact, the car - what was actually wrong with the car was repaired, it may very well take a very significant amount of those cars which were marginal failures and move them into the dynamite emissions responsibility range and a proved oversight would eliminate half of the fleet emissions in a year, which could make this discussion of the minutia here quite important. But the issue of utilizing what's between the ears of the people that do this job in this State and supporting them to actually fix what's broken might make a much bigger improvement and solve your problem with the marginal failure that doesn't get improved or oftentimes gets worse by you and your friend from Nevada. So, I would suggest that you look at - take a possibility of taking a look at some additional data here, some additional support of finding out

if what's broken gets fixed and what kind of an effect that could have on the fleet and the industry and the State of California health.

CHAIR WEISSER: Thank you, Mr. Peters. Are there other comments from members of the audience? Thank you. People getting hungry? Well, how about one more discussion before lunch break. Is that okay? Because Jeffrey Williams has a discussion that is actually the item after what was next, but it's very closely related to what we're discussing now and I think if we hear Jeffrey, we accomplish two things; we get some connectivity between these two discussions and secondly, the lunch rush will have been over and we'll be able to speed through to our meal more efficiently. Is that okay with Members of the Committee?

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MEMBER WILLIAMS: I've done a study of 1987 VW Golfs that I'd like to report, but my broader issue is really one of methodology. I'd like to make an argument on the importance of looking at the history of the vehicles, the individual cars, but also in this case, '87 Golfs. In contrast to the type of study reported upon, which we might call a cross-sectional study that doesn't think about the history. I'm not saying those aren't useful studies, I'm just arguing that the histories help. In the case of the comparison with Wisconsin, it might be helpful to have known what was the

failure rate on those Pontiacs two years before or the individual cars. It would help us understand a bit more what's going on. I'm using these Golfs as an example of this type of argument. When we've been talking so many months here, so many meetings, about such issues as do repairs last, are the vehicles repeatedly failing? Mr. Peters is always asking are the repairs working. That's really about the history of the vehicles, that is we should see the same vehicle repeatedly failing if the repairs aren't working. We might also want to evidence that the worse performing vehicles are the ones that are being scrapped. We need to know how they've done previously. And similarly, when we talk about cut-points we are really asking if they are the ones that are going to affect the future fleet. They might be retire - a car that fails there might be retired. So, I'm trying to make a methodological argument basically here, but I think you'll find the history of these 1987 Golfs intrinsically interesting. It's not quite what I expected and it makes a number of these issues look more complex than not, unfortunately. Before I look at the Golfs, though, I'd like to review some arguments on a more hypothetical level, and also to get you used to the types of diagrams I want to show you. I've made up some data here for 20 possible cars and how they've done on the high-speed mode of the ASM test. Looking at the hydrocarbon

parts per million on the vertical access and the NOX parts per million at the horizontal access and I've made up some cut-points, so that the ones that are within the box have passed this test and the red dots up at the top have failed this test. So, green is to be passed and red is to be failure. And I - and that's the typical cross-sectional analysis. This is a 30 percent fail rate. But what's interesting, I would argue, is what happens in these tests, and so let's go through a couple scenarios. Well, maybe first we should say let's keep track of another group of cars. The yellow ones where we might have higher cut-points - or excuse me, lower cut-points. We're gonna keep track of these three colors and what does their history say in the future. First of all, those red dots have to be repaired. They're not legal because they failed their Smog Check. What might happen to them? Well, one might be officially retired, agreed it's not worth repairing this car, DMV is told that it is junked. Well, other ones might be repaired and some might be repaired better than others or at least get a lower score. The question will be are those better repaired so I have two yellow-red dots here, which are ones that have been repaired, but their NOX and hydrocarbon scores are still fairly high. Well, we have three green dots. So there are 19 vehicles remaining. What happens at their next biennial test? I will first show you what we

might call the rosy scenario, or at least one where there's a clear-policy analysis, and then I'm going to show one that isn't that. Let's look at the rosy one first. Three - two more cars have exited this fleet, one of them a green dot, that's what it was the first test, has been involved in some accident and was scrapped. But (sotto voce) - something like that. And we find a yellow one also was officially retired. That is the second test, the second cycle test was never done. Notice I've put most of the yellow dots, those yellow on the first cycle are now showing what would be in the failure range, so including one of the cars that was only slightly repaired so that red-yellow dot is up there. This is a case where if we'd had - more stringent cut-points, we might have gotten a lot of these cars out. It's pretty clear that these are repeated failures. The policy implication is fairly clear that we might have wanted those more stringent cut-points. Does everybody follow how my diagram is working and the colors? Well, if so, let's look at the same test results for the 20 - for the fleet of 20 cars, but a very different scenario. In this case, there's still three cars that have exited the fleet. The one that has the black and red, that was a failure in the first cycle, has had no subsequent Smog Checks and the suspicion is it's on the road or not being used, where the green one that before was - no subsequent Smog Checks, has been

retired officially, as one that looked to have been fixed quite well, which is that green-red dot. And meanwhile, up in the right-hand corner where all the failures this cycle are, are primarily green dots, something happened in the car, where most of the yellow dots before are now in the easy-pass, which might be that this was just the effect of the fast-pass algorithm and they were actually much better cars all along and the next time that they're examined, which took two years, they passed easily. These are the same test scores the second time in each of my scenarios, but it should be clear that the history, what happened the time before, really alters our interpretation of what to do about this program, whether just tighten the cut-points and deem whether we're spending our money on repairs very well, whether we should have fast-pass. All those issues are effected here. This is a hypothetical. What will be more interesting is what happens with this sample of '87 VW Golfs. I don't think it will surprise you that the interpretation is going to be someplace in the middle of these two things, which is a little discouraging. Let me explain my sample of '87 VW Golfs. I've identified them by the VIN and sorted them chronologically. I didn't go through the data to find where someone said it was an '87 VW Golf, but I used the VIN to identify them. That's more accurate in theory. And I applied this standard; that there

must be at least one ASM test for the Golfs, actually I have 4,300 VW Golfs in this - in the entire dataset that I have, but I've asked that a Golf have to have a ASM test between October 1st, 2000, and September 30, 2001. I'm imagining that most of these are the biennial test. An '87 Golf should have been bought how many years before over that period. We might just think of these as the 2001 test for the '87 Golfs, they're 14 years old.

MALE: (Inaudible)

MEMBER WILLIAMS: No, my entire sample covers all tests from January 1, 2000, through September 2005. So I have the potential here to track these cars through three biennial tests, and that's what I'm really trying to do and, indeed, I have done that. As you can see on my list, I'm looking - I'm recording if there're further ASM tests done, as long as they're done at least a year ahead or three years ahead. There'll be some change of ownership tests here. But most of them are three cycles of biennial tests. And in each biennial test cycle, I potentially am recording to examine two tests. If the car failed, I ought to find another test. In this, I've ignored the aborted tests, I think that's an important issue. I've argued about that before, but I though that was a little too complicated. I've also required that there be hydrocarbon and NOX numbers for these tests. A few of them are missing for some reason, but most

interesting for our purposes is that with Rocky's help, I've looked into the DMV records of these Golfs. In fact, of the 4,300 Golfs, we've put the VIN through DMV and come back with what's happened to these Golfs. And there is various complicated coding that I've learned to understand. I'm willing to summarize all that with saying that they've been officially retired and not distinguish among whether they've been junked or non-opt, whether they've been in the salvage category or they went out of state, which a few did. I've noticed - I'll say in passing that there are many of these vehicles have been non-op'd and then junked, so there're actually two records. That's probably worth studying itself. I'm just gonna tell you whether we have found them officially retired or not. All right. What happens with these Golfs? Hope everybody understands, I have 928 VW Golfs that had an ASM test sometime in this per - let's call it 2001 and it's the first - I'm gonna show you first of all the first test scores on these Golfs. So, that could be a pre-test under some circumstances. And I understand this is a normal reckoning that BAR and ARB has done about the typical pass-fail rate. Here are these Golfs. Oops, excuse me. I'm forgetting, I need to tell you a little more about the data, just so you understand. This is a particular Golf, California plate 2GKM228, whose registration is current through September 26, 2006. This Golf resides in

Davis, California. Why did I pick Golfs? I own one. I own that car. And there are four records in the large datasets I have and I'm gonna show you a little example of this so you can understand what I'm looking at. Do you see that there's a date in about the - 1/3 over. So this particular Golf on the 2nd of October, 2001, at 11:08 in the morning had a Q-test, see that Q there, that's a pre-test, at Station RA-214615, which is a test-and-repair station in Davis. I didn't even know of the test-only and I took it to my regular repairman, who evidently, did this test on it. I don't even know that. Three days later, I took that car to a test-only shop in Sacramento, that's the 5th of October. You can see what the mileage was over that three days. It went from 119965 to 120026, and you'll see my test results there. But along the way, you'll see something odd. See the column that says QCPP? That C means change of ownership, which it was not, which is now giving me a lot of worry about all the analysis that we're doing about whether cars are directed or not. Well, it's supposedly in the algorithm that converts these tests. The P means directed. This car has been directed three times, actually. We have four test records. The last string of numbers are the hydrocarbon, carbon monoxide, and NOX, so 0053 is, in that pre-test, the hydrocarbons for this Golf and it's NOX is 605. I'm going to show these numbers a lot. I'm not going

to show the carbon monoxide in the middle. I note in passing that these two tests done two days apart, the hydrocarbons went from 53 to 101 and the NOX from 605 to 599. There's some evidence right in there about how reliable or how consistent are our test results. Maybe pretests are worth studying from that perspective and so forth. This car passed all four tests, which is that final P on the high speed and it passed all the others, too. So for every Golf that, in my sample, the 922, I have these records. In some case, 10 or 15 records, in some cases only one, but a minimum of one. We're going to follow their chronology. This car, however, is not in the sample. Why? Because although the inspection certificate and registration was due on September 26, 2001, its owner didn't get around to doing this until October, and it missed the September 30th cut-off. You might notice that in 2003 the owner waited even longer until the 21st of October. That was because an IMRC meeting was coming the next day and he was feeling guilty. And so why did he do it in July of this year? That's because his headlight had been bashed out and he'd procrastinated doing that for so long that the new test requirement had appeared in the mail. And so he managed to look like he was ahead of it, instead of behind. But I wasn't. Okay. I'm going to show you 922 dots, the first test results. I think you can see where the cut-points are

for these VW Golfs, right? The green lines, green is it passed the whole test. How do I have red dots in the middle of the green? Well, this is because I'm showing if the car failed the entire test, so this is the high speed part of the test. About 15 of these Golfs were tampered with and so they automatically failed. Notice that there are a lot of red dots. There are 313 failures out of 922, which is a 35 percent failure rate, which is a very high one. It's not surprising that '87 VW Golfs go through the high-emitter profile and every one of them gets directed in the subsequent years. These cars are polluting a lot, with one notable exception at least, not due to any careful maintenance, I assure you. Some of these cars are really polluting a lot. Notice the three dots way above 400 on the hydrocarbon. I had to change those numbers to have the scale that is visible, one is 3,000 and something.

MALE: A dead misfire.

MEMBER WILLIAMS: Unless, I guess it comes out richer when it goes out, right?

MALE: It's a dead misfire. Hydrocarbon's unburned gasoline. It's a dead misfire.

MEMBER WILLIAMS: It's just incredible, right. There are three of those, about 100 of these are gross polluters. It's amazing, right? It's also pretty - not clear where you would draw a line saying let's tighten these cut-points

because there's an intermediate group, right. But I'm gonna try that anyway. I've consolidated this picture just to make the scale a little easier for us and I'm going to distinguish yellow now, which were greens that passed, but pretty close to the cut-point.

MEMBER DECOTA: Now what if the reds and greens are failures, one-time failures?

MALE: (inaudible).

MEMBER WILLIAMS: This is another portion of the test - failed, right.

MEMBER DECOTA: Okay.

MEMBER WILLIAMS: So I'm gonna keep track of these three colors and some of you might say well, how do you decide that a green that's almost on the line with the yellow isn't say, what's green and yellow, aqua? Well, yeah, I agree and how about the reds that are almost yellows? Shouldn't they be orange or something, I agree. I'm making three distinctions here where most of the time we don't even trace the histories at all and three colors was about beyond me. Mr. Peters, you have a question? I don't want anybody -

MR. PETERS: Yes. The red dots in that picture are false-failures because they failed visual or functional, is that -

MEMBER WILLIAMS: No, I'm saying they're false-failures at all. They were failed -

MR. PETERS: They were failed but they passed the emissions portion of the test?

MEMBER WILLIAMS: They passed the high-speed hydrocarbon and NOX portions of the test.

MR. PETERS: But they might have failed the idle -

MEMBER WILLIAMS: They might have failed the low -

MR. PETERS: Or the lower speed.

MEMBER WILLIAMS: Or the lower speed or the visual and all that. Some were tampered with.

MR. PETERS: So some of those in that smaller section actually failed the test - the red ones failed the test but that was because of a reason that - in addition to the high-speed portion.

MEMBER WILLIAMS: Yes. And that's already interesting, although I did relate the high-speed results, like for NOX, with the low-speed results and the correlations about .9. All right. We're gonna follow these 922 cars and see what happens to them. The first thing is that the red ones should have been repaired. I'm gonna make a window that says they had to be repaired within 60 days. Most are repaired within the next couple days. So now we start to see what the history matters. So here is what happens to the red ones. There should be yellow and green still there, but I thought we were getting a little crowded, right. So what are the red-yellow dots, those are ones that repaired and just passed,

but there are a lot of green-red dots, which means they were apparently repaired quite well or they got lucky on a reading or something like that. What I found most surprising about this was that of the 313 cars, 84 fell out immediately because they failed that test and I don't think we've been talking about that very much, so that initial test makes a lot of people say time to junk this car. The majority of those were officially junked, which is the little red-black, black dots which retired officially. There are 31 for which I have no subsequent records in the Smog Check data.

MALE: And those are not just subsequent records anymore. This year, but you're saying through 2005 -

MEMBER WILLIAMS: Yes.

MALE: They've never reappeared.

MEMBER WILLIAMS: They have never reappeared.

FEMALE: (inaudible).

MEMBER WILLIAMS: Yeah, I don't what happened to them. We're gonna -

MALE: They're out in Rio Linda up on blocks.

MALE: Excuse me, was the registration checked on it? Did they - although they didn't get any smog checks, were they registered?

MEMBER WILLIAMS: They were registered, they didn't pass the smog.

MALE: Cars are registered all the time that don't pass smog. I'm just wondering if there was an indication that there was any illegality going on, if the DMV was checked on it.

MEMBER WILLIAMS: I didn't systematically study that, I have those data, and so I will.

MALE: That's making the history of the DMV and fine, all right. Let's move on. Think of two years have passed that these 922 cars are being thought about. What's hap - let's trace them a bit. We have 427 greens, 188 yellows, 53 red-yellows, 176 red-greens and 84 are already gone, so I'm now going to show you the test results on a cycle next. We'd like to see, right, a lot of the greens still green. If a lot of the yellows end up where the reds should be, then we've got a problem, right, or an opportunity to tighten the cut-points. Okay, here it is. I invite you to study this. One thing I'll hint at. Do you notice that the cut-points got tightened by 2003 for this type of car where all the little, on the note, my little line is the previous cut-points? You see all the little green dots that are at 130, that was a tightened cut-point.

MALE: They only tightened NOX, isn't that right?

MEMBER WILLIAMS: The hydrocarbons. Okay. So, where are the green dots? Well, they're partly in passing again, but some have failed. A lot of the yellow dots moved into the failure range, but I find the striking thing about this

diagram to be in the right most part of it. Most of these cars are gone.

MALE: They're gone without a certain pattern of pass or fail.

MEMBER WILLIAMS: Some of them - yes, we got a lot of green ones that just disappeared now. Some of the green ones were officially retired. Wow. A lot of cars are going. That's giving -

FEMALE: People are leaving California.

MEMBER WILLIAMS: Or they leaving California, all that. Let's summarize this, though. The failure rates in the second cycle by the color code of those that had the test. The red-yellow was 43 percent, red-green 36, yellow, 50, and green 26, which is a suggestion that the cars didn't fully get repaired or there's a problem with them. But wait on, because we have another test cycle. And here's by the third one. So this is the color and the first test cycle. I could update colors, so green-green and what happened to it; green-red, what happened to it, I - that was beyond my ability to do the colors. I've made a second column of the cars that have disappeared, retired, whatever, in the time between 2003 and 2005. There are only 225 VW Golfs of the 922 left in six years.

MALE: I'm not surprised.

MEMBER WILLIAMS: I'm not surprised either. I'm hopeful it might be worth something above zero in a couple more years,

the one I own, right, at the current rate. There are - of the 4,300, I can find someplace in the DMV database, we're down to 1,010 registered as of January 1, 2006. These cars are going, right?

MALE: (overlapping) for parts, Jeffrey?

MALE: Question, I looked at the non-retired and in-use yellows and I don't see any pattern -

MEMBER WILLIAMS: I don't either.

MALE: - which makes me - I think that's some implication on the cut-point -

MEMBER WILLIAMS: Yes, it does. It's only VW Golfs, but it's a small sample, but yeah, it's not clear that the yellow ones - this is - two test cycles later are looking all that different from the green ones and indeed two cycles in most things are looking the same. The failure rates in the third cycle, the red-yellows 25, red-green 23, yellow 24, green 24. At this point, it's random from what it was two years before. Now, I should show you what it was just four years before - I should show you two years before, I think we'd see stronger patterns by the updated color, if you will. We did see that, but we have - history matters, but at some point the history is irrelevant. What these cars in 2005 experienced in their 1998 test is probably not relevant anymore, but what happened in 2003 is, right? Here's another way to look at this though, that is a little more

perplexing. When we looked at those tests in 2001, there was a 34 - 35 percent failure rate. 2003, 27 - 24 in 2005. How is that possible? These cars are getting older, they ought to fail more.

MALE: The strong survive.

MEMBER WILLIAMS: The strong survive or the ones that weren't driven very much survive because the ones in 2005 had way below average mileage in 2001, right?

MALE: Right.

MEMBER WILLIAMS: Not surprisingly, right?

MEMBER LAMARE: Did you have the - are you saying you had the mileage?

MEMBER WILLIAMS: I had the mileage, apart from the fact that about 1 in 10 VW Golfs has its odometer freeze or spin. If we take that problem out, I know one that had that, there are at least 30 of the surviving cars that had the same odometer reading in all three tests, and I don't think - I know they had to drive to the test center, right? So there's a problem there. There's a couple that have spun up to 99999, but if I take - that's why I take the median, I take those out. The cars that aren't driven very much are the ones surviving. Well, but this means that the failure rate is a function of the whole profile of this make and this is why I was asking a bit about Wisconsin versus Arizona. Let's imagine that cars don't last very long in

Wisconsin because of some other reasons such as salt. The ones that survive in Wisconsin are - the equiv - only 14 years in Wisconsin are probably the equivalent of an 18-year-old car in California and there ought to be a different failure rate because of the survivorship problem. I'm a little - we have to think not only of the history of the individual vehicles, but of the whole make and its profile. I think implicitly we've been saying the retirements is a fairly constant proportion of the fleet, it isn't and once you think about it, of course, it isn't. These Golfs are coming to the end of their useful lives. It's amazing that anybody keeps them and on it goes, right?

MALE: Well, I think we need to emphasize that a 25 percent failure rate with the cut-points, frankly pretty low, is nothing to be proud of.

MEMBER WILLIAMS: No. I think the bet - and so that gets to a final point. What is the main effect of the Smog Check program? It's for - it's retirement. It's forcing a lot of cars out, particularly VW Golfs, and that's probably a really good thing.

FEMALE: A good thing.

MALE: That is a good thing.

MEMBER WILLIAMS: It's a really good thing. And that gets back to what's the benefit of this program, this model - well, that car is replaced by some eight-year-old cars, something

like that. I think we really want to look at those model assumptions in (unclear) because that's a major effect of this program. At least for these elderly cars, like a VW Golf. Let me look at it though, from a slightly different way. Of the original 922, only 218 are registered. Of the 225, 7 didn't get the final. Of the failures that weren't done, they're only 218 left. Of the original 313 failures, only 52 remain, which is a 17 percent survival rate. Of the yellows, 24 and the greens 28. That's intuitive -

MALE: And the mileage.

MEMBER WILLIAMS: And the mileage and all that is the same thing. But once we start thinking about the history of these cars and the history of the group of cars, we start realizing that imposes some different perspectives on the program. I think we need to think about it this way. As I say, my point is mostly methodological. I don't think anyone's going to argue with me that it's better to use this information about the history of the vehicles themselves. I don't find glaring evidence that cars are just being fixed for a day. A lot of these repairs seem to be lasting, but there's some evidence that some are being fixed for a day. I think we really wanna look at the reasons for the failure. I just made everything a red dot and whether it was a failure on the functional test or a gross polluter on this high-speed test, it probably is very different and the same

way I think we can learn a lot about what's going about fast-pass from looking at the pretest and the next test and that's a new idea for me. I encourage everybody to do the history of these tests, but my goodness, getting the dataset organized like this was a lot of work. I own a VW Golf, so out of 70 million records, but I have the potential to do more. It takes a lot to match up all this so when everybody is saying that it's a low to moderate analyst expenditure time, I'm not sure about that. I'll take some questions.

CHAIR WEISSER: My first question is did you succeed in burning through one or two PCs on this?

MEMBER WILLIAMS: Yes.

CHAIR WEISSER: Well, I - this isn't so much a question as a comment, which is the method of you presenting this information is really illuminating and easy for us to understand, easier sometimes than other systems that I've seen put forward for data and I'm very thankful of this. I, on the one hand, want to compliment you and on the other hand want to curse you because I think you have confused the situation. I think some of my assumptions now, I'm gonna have to step back a bit. And, in particular, the numbers on, as you were saying, the cars on the far right, those that are officially retired or that have disappeared from the system seems to be the biggest impact. Anyhow, questions from Members of the Committee. We'll start from

the far right. Mr. Pearman, do you have any further? Mr. DeCota?

MEMBER DECOTA: The amount of vehicles that passed at the end of the five years, the 54 vehicles, would it be possible to track them to get their maintenance history or some kind of an idea of how those cars were maintained over that period of time?

MEMBER WILLIAMS: I don't know.

MEMBER DECOTA: On the test that was done on your VW that you did not order, that showed up on the record, right -

MEMBER DECOTA: It was probably a repair that he used his testing equipment to verify that the emission levels were satisfactory and never reported it to the owner. You know, it's used every day as a tool. So that may be, I don't know. I mean, that may be, because I'll bet you brought on a performance issue, you brought it in for repair or service or something and had an issue with regards to performance, so that's how that could compile, which bothers me because it could really skew the information that we're getting on high-emitter profiles and that type of thing. Okay. The industry could be actually hanging itself out to dry on this stuff.

CHAIR WEISSER: Okay. Very interesting. We'll proceed, then. John, do you have something? Paul, you've been very, very quiet today. Very good. Please.

MEMBER ARNEY: Is there any possibility that it's not just coincidental that these vehicles have disappeared out of the system, that they're - I mean, they're very old. Is there any possibility that maybe they're just not worth keeping on the road anymore and - and that's not - doesn't have much to do with passing the Smog Test? Just a thought.

MEMBER WILLIAMS: Well, most of them are disappearing unrelated to the Smog Check history. They're just going, right?

CHAIR WEISSER: Well, I don't - don't look at me. The question, Paul, as I under what you were saying is do they -

MEMBER ARNEY: Well, are they off the road because we've tightened the standards or are they off the road because they're just junk?

MEMBER WILLIAMS: I would say there's some evidence there that the standards themselves are forcing people to say, time to say goodbye to this car. But these cars are going anyway, and I'll confirm that with one story. Why do I have a VW Golf still?

MEMBER ARNEY: That was my next question.

MEMBER WILLIAMS: I went in 1999, six years ago to by a Jetta, the same dealer I bought the Golf from and when I first came to California in 1987, and we negotiated the price for that new Jetta and I finally said well, what will you take for my - you know, how much will you give me for my Golf, they

said, we're not even gonna bother to help arrange for you to send it to scrap. This thing is a piece of -

MEMBER ARNEY: Yeah.

MEMBER WILLIAMS: And so I owned two cars suddenly, right? And so I was - he told me about giving it to charity and so on. I brought it home and was thinking about how to do that and called up my insurance company to say about the new car and the agent said, so are you keeping your old one? Well, I said, for the moment, but not very long. He said, well, we'll charge $1,000 for your Jetta, but if you have the Jetta and the Golf, we'll charge you $850. And I said, would you run that one by me again, please. It turns out that that's the regulations in the State of California. They somehow imagine I'm using both cars. Since the registration fee was $50 for the Golf, I was ahead, so I kept the car. I've since gotten used to having two cars and all that, but by all standards, its value was zero in 1999.

CHAIR WEISSER: Now you have a front lawn ornament.

MEMBER WILLIAMS: Yeah, you know it was being used, it's got (unclear) miles on it.

CHAIR WEISSER: Oh, that's not bad. Okay. Roger, do you have anything?

MEMBER NICKEY: Fascinating.

CHAIR WEISSER: It really is.

MEMBER NICKEY: I was just -

CHAIR WEISSER: Really is. Jude?
MEMBER LAMARE: No, I still need to absorb. One of the difficulties I'm having is I think of I would like to see just the greens and the reds and forget about the yellows for a while and see how that plays out and then - then put the yellows in, so I'd like - I'll just sit down with this -
CHAIR WEISSER: I think the migration of the yellows in basically a random pattern is pretty darn interesting in terms of the notion of tightening the cut-points. However, the benefits from tightening the cut-points have, in this particular instance, have little to do with the emission reductions, but have a lot to do with the retirement, so maybe we should make them really tighter.
MEMBER LAMARE: I'd like to look at that more and the fact is that 50 percent of the yellows failed in the second cycle and there were emission reduction gains from getting them fixed and so -
CHAIR WEISSER: Do you have a color copy of this that - could you get us color copies of this? I want to show this to my - to my guys, because I think it's really interesting.
MEMBER LAMARE: So, we want to think through this, because there's a lot of really interesting information here.
CHAIR WEISSER: Okay.
MEMBER LAMARE: Thank you, Jeffrey for putting in all that time.

CHAIR WEISSER: Well, let's open up to some questions before hypoglycemia sets in to the crowd as a whole. Bud?

MR. RICE: Hi, Bud Rice, Quality Tune-Up shops. Just a quick question. If - if you tie a ribbon around that group of people, is there a way to watch what happens next? In other words, if you had a Golf and now they don't. So what happens next, is kind of an interesting thing. Did they retire that car and then get a 1995 car in exchange? And if that's true, there has to be some effect on the air, I would think, by getting rid of that Golf and picking up this car in exchange. Thank you.

MEMBER WILLIAMS: I can do that, but I haven't. Remember, I have all DMV registrations as of January 1, 2005, and I know who was the legal owner of these cars in 2000, so let's see what they bought.

CHAIR WEISSER: Well, I think it's a real interesting question because there are, you know, a certain amount of credit is taken in the SIP for retirement systems and the like based upon projections about the nature - how many years newer a vehicle are people getting. And there have been studies. I'm assuming those numbers aren't plucked out of thin air. I just don't - I have not seen the studies, but I've been told that there are studies, but I think you're raising a good question. It's not merely how much newer a car, but it's also what kind of a car. You had the drag racing king

here with his Golf, they might get something really efficient. Mr. Cackette, please.

MR. CACKETTE: Yeah, we've done a study on the - what happens to the cars that are scrapped in the BAR scrap program and the people, most of the people buy a new car and it's typically eight years newer, so it does tend to have lower emissions. Eight-year-new cars get driven more than eight-year-older cars, so there's somewhat of an offset there. There's a few percent, you know, that don't buy new cars, take the bus or whatever, but most of them buy, on average, an eight-year-newer vehicle. You know, and we'll give you $1,000 bucks for that car, you know. You just have to fail the Smog Check and there's a check in your pocket.

CHAIR WEISSER: We can arrange that easily. There's the guy to my right and a guy to your left.

MALE: Bring it over for a test. We'll take care of it.

CHAIR WEISSER: Bring it to the community colleges, they'll take care of it.

MR. NOBRIGA: They don't want them. Larry Nobriga, Automotive Service Councils of California. A question that comes to mind on your right column, all of the greens that got officially retired, they could not be part of the BAR scrapping program because they had to fail the test. How many of those might have come from the various air management district scrapping programs where they just mail

out a letter and say we'll give you $500 bucks or whatever for your 1980 automobile?

MEMBER WILLIAMS: I don't know, but I think we could trace that through. I just summarized all the DMV data into was it official or not, because I thought it was interesting how many there's no official record of, but I didn't track the category that is junk versus non-repairable junk, which I think are almost always those official retirement programs.

MALE: (inaudible)

CHAIR WEISSER: Any other questions? Okay. How many people would like to take a lunch break? Okay. I know we have a - I just want to apologize to - who am I apologize to this time? Mike McCarthy who is going to be chatting about OBD II, is it okay if we don't and you get up there, people are going to start throwing rocks at you so, it's five to 1:00, can we get back at a quarter to 2:00? Okay, so it's giving you 50 minutes for lunch. We're gonna start at a quarter to 2:00. Thank you.

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CHAIR WEISSER: Okay, ladies and gentlemen, if I could ask you to take your seats, we will reconvene the session. Thank you. I hope everyone enjoyed as delightful a lunch as I did. So, right now, we're gonna hear Mike McCarthy, Mike, chat with us about OBD II.

MR. MCCARTHY: Good afternoon. I'm Mike McCarthy with the California Air Resources Board. While Rocky's pulling up my presentation here, I'll just - like Phil, I've never been here before so I'll introduce myself. I've worked for the Air Resources Board for going on over 13 years, 12 of them have been involved in OBD II, specifically. So, you won't find too many people that have been working on OBD II that long. I'm a manager of the Advanced Engineering Section. My section has responsibility for the entire OBD II program. Everything from the regulatory side of it, writing the regulation, updating the regulation, to doing certification each year, and doing enforcement testing of the OBD II system. So, when it comes to OBD, it does come through my section at some point. Okay, so I wanted to give you a little presentation today just to give you a little update on OBD and also I wanted to respond to some things that - like I said, give you a little update on the program, some findings that we've had, some studies that are ongoing and also to give you some counterpoints to a presentation you previously had from Doug Lawson. At the end of it, I'll have a little bit on a continued study that we're doing, again looking into OBD and how it's working and what's going in the field. I think this probably goes without saying but I sometimes like to reiterate it. I hear it rephrased and paraphrased many different ways, but the OBD philosophy is

different from a tailpipe test and I/M scenario. An I/M scenario, we originally envisioned was just to try to catch the highest polluters, skim those off the top and OBD kind of changed that and went after actually finding broken components on a car and giving a mechanic an ability to go actually figure out what's wrong. As car were continuing to get increasingly complex, we noticed mechanics struggling to figure out what was wrong, we were struggling to figure out what was wrong. The manufacturers changed things as fast as they could and you couldn't get service information to stay pace with it or anything and so we - we focused on trying to make cars repairable. And we sort of have two categories of things in OBD; we have major emission controls, like the catalysts, and they're actually monitored to an emission threshold. When they deteriorate to the point that they exceed a certain tailpipe level, the OBD system is designed to detect that. For most of the other components on the car, we're looking for obvious failures: open circuits, shorts, rationality failures where the sensor is telling you a value that doesn't make sense at all for that sensor. And, you know, we're trying to detect malfunctions before the vehicle becomes a gross emitter. If we wait until it has become a gross emitter, we've lost the battle. We've already lost those emissions out in the atmosphere. So, we want to detect things as they break, as they happen. And I

think that’s an important thing that it is a little bit of a different philosophy than what we’ve had in the past. OBD II was implemental in 1996 model year. We actually phased in a little in California in ‘94 and ‘95, but it’s a real handful of vehicles in that timeframe that are OBD II equipped. It went nationwide in 1996. There are over 120 million cars in the U.S. operating on the roads. That doesn’t even include Canada, which has had the OBD II system since 1997. And then other areas like Europe which have developed OBD regulations that are not too far off from ours. They are less - generally less stringent, but they are developed. Out far as Japan, many other countries have also incorporated OBD-type requirements. And one of the important aspects of OBD II is it wasn’t something we could just adopt and walk away from. We get into the nitty gritty of the details of the car. How they work, how the control systems work, what the new emission control components are coming on so they can be monitored and diagnosed by technicians. So we routinely are in a biennial update cycle where we come back to the Air Resources Board, present an update to the regulation with amendments, new monitoring requirements, modified monitoring requirements, those kinds of things to make sure we are keeping pace with technology. We get a lot of feedback from the field. When we find things that don’t work right or we go out and we get

something from the field how it could be better or what more information could be made available to a technician and we're actually in one of those biennial cycles right now. We're scheduled to be in front of the Board in April of this year to present an updated version, like we have, I said typically we do updates every couple years. One other little thing I wanted to hit with a just a common sort of misconception or sort of different way of paraphrasing of OBD II. People have struggled with how OBD measures emissions. It's not a - you know, and they don't understand how this OBD system - it's not a tailpipe analyzer sitting off-board that measures it. Emission levels are inferred based on other sense parameters and the car manufacturer will sit there in the emission lab before he builds a car and they will run emission tests and develop a correlation between other sense parameters and tailpipe emissions and then he'll set the calibration before they start building the cars. There is no magic tailpipe sensor in the car. And let me give you an example. Exhaust gas recirculation or EGR systems, some of you I know are very familiar, some others may not so much, but you circulate exhaust through the system to lower NOX emissions. A common failure mode of these is passageways get - start to get plugged, you can get less (recording ends) -

CHAIR WEISSER: Okay, now try it.

MR. MCCARTHY: Yeah, now I'm back. Okay. So as I said, a common emission control is the exhaust gas recirculation, or EGR, a common failure mode is the passageways start to get plugged up over time or coped up and you get less flow. As the flow goes down, usually NOX emissions will start to climb back up. So a car manufacturer, when they're designing a car, will gradually restrict the flow in the system and constrain it down and measure tailpipe emissions, and when he hits the point where he's reaching the tailpipe emission level, then he will correlate, say a pressure sensor on the vehicle to measure that amount of EGR flow. So now he's developed in the lab a correlation between the measured flow and the tailpipe level. So when he goes out in the field, the cars don't have a tailpipe sensor on them, but they have this pressure sensor and it can be calibrated to set up for that flow that translates to the emission rate. So everything's sort of - it's and inferred, developed in the lab by the car manufacturer before the cars go into production. Again, that's for the major emission monitors. For many other components, there are short circuits that open and stuff like that. They don't calibrate those to emission threshold. The sensor's either open-circuit or it's not. A question we get asked a fair amount is how does ARB know that OBD II is working. We spend a substantial amount of time with this regulation. As

I said before, we kinda go up - we go back and update the Reg every two years. We spend a lot of time, my section and our lab, bringing vehicles in off the field. Every year, every vehicle has to be certified. A manufacturer has to come in with a description of his OBD II system and test results to back it up and we go through that and review it and look for - make sure it meets our requirements, ask questions about how it's working and verify that they are actually meeting our requirements. On top of that, we have testing requirements imposed on the manufacturer that they have do. Some happen before production starts, some happen right after production starts. And we do these things to make sure for those emission threshold monitors that they turn on the mill on at the right point, we make sure the cars talk right to a scan tool. That's one of the things we got from feedback. A Smog Check started using OBD, we found some cars didn't talk right. We now have a conformance tool. We worked with SAE, the Society of Automotive Engineers, and developed a standardized tool that we can now make every car be tested off the assembly line and make sure it's gonna talk right. And we actually go through various things to make sure the monitors are running frequently in use. All these things that we've gotten from feedback in the field and learned where manufacturers made mistakes or things like that and cleaned it up. On top of that, of

course, my - one of the rolls of my section of my staff is to grab cars; we take new cars, we take old cars, we break cars, we make sure they're working like they're supposed to. There's a surprising amount of people watch me and my staff drive out of the lab in a brand new car that is running terrible because we've implanted a malfunction to go drive it on the road to make sure it's working right. We have programs where we get cars back from the field from Smog Check stations that are having problematic vehicles they can't figure what's going on or they think something's not working right. We'll bring those cars into our lab and spend some time testing them and looking at them. So we've got a pretty powerful feedback mechanism in today's world with the Internet and everything else. Pattern failures quickly show up. We get lots of feedback, we get feedback from the I/M data from Smog Check. Lots of things we can look at and look for trends to go investigate and see if things are showing up. Is OBD II perfect? No, of course not. You know, no program has ever been perfect. Two-speed idle, ASM, visual functional, everything you can always point out there's pluses and minuses to everything, things don't catch everything. We have found plenty of vehicles that don't right. We've gone after enforcement actions on many of these. In some cases, they're recalled, some cases it's a TSB, technical service bulletins, are issued with

special repair procedures. Oftentimes it's extended warranty settlements, you know, it depends on the nature of the case and what the problem is. A recent one that was announced and we had a press release on was regarding 1996 through 1999, a substantial number of Dodge and Jeep vehicles had catalyst problems. And actually the catalyst was failing. And in some cases, the OBD system was picking it up and some cases it did not appear to be picking it up. But they were failing catalyst, actually rattling apart, destroying the sub-straights and showing up in I/M and other places with an empty - with no catalyst in the vehicle. This actually is something we discovered during testing in 1999, I'm embarrassed to say it took us that long to work through that case, but there was some crafty work on the part of Chrysler's lawyers that slowed the process down, but we did get a settlement just recently in California. It's something like 90,000 vehicles with extended warranty and another 40,000 that are recalled, over $1 million in penalties and other stuff like that. It also - there's a nationwide settlement with corresponding higher numbers for the rest of the nation. We do pursue these things, we do go after what we can find and fix. I hear a lot about false mills, and you know, manufacturers obviously are usually the first to find about false mills because it shows up in warranty. Technicians - cars are coming in, shows up as a

warranty claim, and no trouble found. Can't find anything wrong with the car, can't fix anything. There have been very, very few situations of patterned false mills. Car manufacturers actually tend to react very quickly when it does happen. Many times they show up in I/M and they will come back, so there are times when you have the first couple months of production of a year, and they'll find something and fix it within that fast and so it's - when you have a false mill where the mill comes and there's actually nothing broken on the car, nothing wrong, nothing that could be repaired, those situations have been very few and far between and the manufacturers have responded very quickly to fixing them. The vast majority of the systems out there do work correctly, so we test a lot of them, we have a lot of feedback parameters. Have we caught every single one that's not working right? No, of course not. Will there be cars - continue to be cars that don't work right? I'm sure there always will. We're never gone be in a situation where you can test every single car and make sure, but we have learned a lot and we have added a lot of requirements. You know, essentially, in 1996 was the first year of implementation and went across the nation and across all cars in 1996. There were a lot of added monitors in 1998 that phased in and in 2000 that phased in, 2002 that phased in, stuff that we learned - we hadn't earlier anticipated they would fail

or because emission problems like missing thermostats or stuck thermostats that we then quickly realized even before we saw them in the field, we figured out there was loopholes and then pushed to adopt requirements to close it up. And that is one of the things that has made this program. The manufacturers don't like it because they continually are hit with new challenges with new monitoring requirements, but we do go back to Board routinely and update the requirements when we find new technologies or things we might be missing. I want to go through a couple of Doug's slides that he presented to you and point out some perhaps alternate ways to look at it. You know, everybody likes to say there's many way to look at data. However, not always lead to real meaningful conclusions and I want to point out a couple that I think are probably not appropriate and then in some cases could be actually misleading to the Committee. And some of it I want to talk about is just what compare - which groups you're comparing and looking at. In some case I want to talk about how emission benefits and costs were calculated. And we'll get back into this about how - how dirty the car is before you fix it and whether that means it's a good thing or a bad thing. This is a slide that Doug presented that had a summary that he had built up to after three or four slides and he had sort of four categories of different sort of inspection scenarios and then he had worked out some

numbers for repair costs and cumulative reductions and a repair-effectiveness. The first thing I want to talk about is sort of the categories he broke down here. The first one makes sense. This was a mill OBD - this is a like an OBD-only I/M program. Most of the states in the nation for ‘96 and newer are doing an OBD-only program, so this would be - the only OBD test and anything it catches you account for, anything it misses, you don’t get. The next couple of categories he sort of split up. The first one, the mill, plus IM240, that would be caught by either program. It failed both tests, so if you had a mill-only - an OBD-only program, that would catch it. If you had a tailpipe-only program, that would catch it. And if you had an OBD and a tailpipe program, that would catch it. But then the next two, he’s got called out by themselves, IM240, but no mill, and the last one he’s got mill, but no IM240, and there’s - I think it’s a little misleading to go down these paths, because nobody’s proposing a program that would only fail cars that have the mill on and fail the tailpipe or only have the mill on but don’t fail the tailpipe. And - or - and so I think there’s - I think more meaningful categories would be to look at what we commonly view a scenario as which would be like an OBD-only program. In this case, it was an IM240, a lab IM240 - a tailpipe-only program, or what maybe we have here today is an OBD and a tailpipe program.

So those are the sort of three realistic scenarios that most people are looking at and trying to make comparisons and so I've lumped his three together. The numbers don't change that much, but I think it's more meaningful comparisons than trying to figure out accommodations of programs that aren't really programs anybody is pursuing or looking at. One of the other - back to Doug's original chart, he had talked about cost per repair and he made some findings that - that some of the OBD repairs are the most expensive repairs and implied that OBD are more expensive - on average are more expensive repairs than those that fail IM240. And one of the important things to point here, of course, is averages for the costs of repair on IM240 are based on six and two vehicles and I don't think it takes the statistical power of Dr. Williams just to point out that an average repair costs based on eight repairs or six repairs to two repairs is probably gonna have a lot of variance in it and EPA, who actually did the data, the original testing program and Doug based his analysis on, when they released it, they put an average cost of repair, but they also put confidence intervals. All right, 95 percent confidence intervals that the true average falls within that range. And when you look at that, again we have the blue bar's the OBD one and with an average around $450 and the red one is the IM240 with an average just above $300, but the error bars on it show that

there's an overlap. The true average of the IM240 repairs might actually be up as high as $410 and the true average of the OBD might be as low as $320. There's overlap. And that's why EPA, when they wrote up their findings, determined there was no statistical difference between these costs of repairs. They just didn't have enough data. Now, subsequently, they have tested another 150 cars and if you look at OBD, it hasn't changed much. The average went from something like $453 to $459. The error bars got a little bit smaller, meaning you know, they're starting to maybe focus in on the true average. The ASM - the IM240 data actually changed quite a bit. We went from an average repair with eight repairs up to 17 repairs. It's now at $454 and the error bars have gotten even bigger, because there's been even more variance there. So, I - I mean, from what EPA concluded from the same data that Doug presented, they said no statistical difference. Further testing seems to bear out why they presented the data that way. Updating his chart to include those costs per repair, you know, now you look at categories of $459, plus or minus $95, and $450 plus or minus $155. You start to see the average repair costs as EPA concluded are - seem to be in the same ballpark. Another that Doug presented on this chart here was what he called cumulative reductions in gram per mile, you know, as an emission reduction that he was getting from these cars

and summed it up from all the vehicles that those tests had failed. And he extrapolated, then he went from there to repair effectiveness and in dollars per gram. And the math is simple. He took the total repair cost for each of these categories and divided it by the cumulative reductions and got a dollar per gram, but it should have really been a dollar per gram per mile. And so the costs he have here, we talked about clean for day or I guess you could talk about clean for one mile because he's assuming that you got a repair benefit here for exactly one mile and that's all it lasted to get these dollar numbers. I'll plan out some more about why I think this methodology is wrong, but even if you took that and expanded that out to say, let's assume the repair lasts for two years and 25,000 miles or five years and 50,000 miles. The numbers obviously change dramatically and come down to numbers that are more in line with what we typically see for new measures. So, this calculation of the emission benefits I think is as important one and I've seen this a lot of times compared and I - this chart's gonna get a little busy, but I think we'll walk through it. I just wanted to show, you know, sort of a typical graph of a car. This is a normal, good car, as mileage goes on, some deterioration occurs in all the parts and emissions do tend to climb. From EPA's testing of 150 cars, over two-thirds of them, even though they were all over 100,000 miles, and

the emission standard typically only applies for the first 50 or 100, 120,000 miles, all these cars were over 100,000 miles. Almost all of them were out of the useful life where the standard actually applies, yet over two-thirds of them were actually still meeting the standards. So, good news is, we got a lot of cars, even high mileage, these newer cars are lasting longer, but they are staying clean. The majority of them are staying clean. And you know, again, you can draw this any way you want, but I just portrayed a normal good car deteriorating, staying within the standard for most of its life and even beyond that, and filled in the hypothetical OBD threshold up higher and at higher level that could be some alternate test or revised OBD criteria, whatever you want. If all cars stayed down on the good car deterioration, we wouldn't need Smog Check, we wouldn't be here. They'd all be perfectly fine, there wouldn't be anything we could do in a repair scenario. But we know a substantial number of them have something malfunction and they head off on another path. And this path you can show is steeper, shallower, everything else. I've got a couple examples here. I just wanted to give one of a moderate that starts to go on a decline. These are the excess emissions that we would like to avoid. If we could keep all cars down at the normal good car level, we could avoid all these excess emissions going (unclear). If we didn't touch this

car, it broke, continued down that path until the day it was retired, put it in a junkyard, whatever, those are excess emissions or emissions that are above what the car was designed to produced. And in a repair scenario, or an I/M scenario, when it crosses an OBD threshold, you trigger a light, you trigger an I/M repair, you bring the car back down as close as you can to the normal good car line, and you get what Doug had commented as accumulative reductions or a repair benefit. You went from a higher level down to a lower level and that's a good thing. But that's not really the emission benefit you get out of that car. The emission benefit is avoiding all this that had we not touched the car, this is the path that it would have continued to come along. It would have continued to head down this path. We would have lost all these. The little triangle on the left we've already lost. It's out in the atmosphere before we even identified the car as needing repair. But just looking at the before-repair to after-repair doesn't really tell us what we need to know for emission benefit. Infact, doesn't work that way, we don't model it that way and in a scenario where we have a higher level, a higher trigger point, you do get a bigger repair benefit. So by that strategy, the dirtier you let the car get before you repair it, the bigger the repair benefit. But if Sylvia came in here and said our proposal is we're gonna raise the ASM cut-points to get more

emission benefits because it's make the cars dirtier before they're repaired and that's gonna be a bigger delta, I think you guys would laugh her out the door. You know, waiting until it's dirtier before you fix it, doesn't get us more emission benefits. It does get a bigger repair benefit, it looks better that way, but we've lost a bigger a chunk and when you look at the emission benefit, we're getting a smaller piece of the pie that we could have gotten out of that vehicle. And as I said, you can run through this scenario with all types of different malfunctions, with one that's more severe and rapidly jumps up, you know, and obviously the more rapidly it deteriorates, the smaller the difference between the two emission benefits because it's gonna rapidly transition through whatever your cut-points are. And you can have all kinds of components, you know, you can have a gradual malfunction where again, you know, you have the OBD-triggered repair and emission benefit. With a higher level, it never would have reached that, you never triggered a repair. You do save the repair cost, but you also didn't get any of the possible emission benefit out of this vehicle. And that trick becomes is how do you figure out how many of malfunctions of which kind are out there and how many fall into this category and that category and you can have a catalyst malfunction that falls into any one of these categories. You can have a misfired, high

speed and in 10, 15 seconds, you can completely wipe out a catalyst. The next time you run an emission test, it'll be sky-high. You can have a gradual misfire, you can have just deterioration from the vehicle driving over miles and miles. The catalyst eventually wears out. You can have an engine burning a little bit of oil gradually poisoning the catalyst. So you can have even with one type of malfunction catalyst, you can have it fall into this category, all different categories. And that is one of the things that, you know, MFACT tries to do. It's why it's difficult to model because we - we test surveillance cars, we constantly try to update the model and we have vehicles in MFACT that some grow into moderate emitters, some grow into high emitters, some super-highs, you know, we have all that different types because we're trying to estimate what fractions fall into this, but of course, it makes the emission benefit calculation pretty difficult. And a lot of talk I hear about OBD is that, you know, this is where they think most of the OBD malfunctions fall. It's either right on the top of the good car, they can't see any emission deterioration at all, they run it and it looks the same or it's just this tiny amount and we'd be better off not spending the money to repair that if that's the only emission benefit we're gonna get out of the car. And there's a couple ways to look at that, but one thing is with

OBD and a lot of other systems, is once you have that first failure, you really don't know a lot of what's going on on the rest of the system. The system isn't designed to comprehend all types of multiple degradations and failures all happening at once. It's designed to catch things one at a time. And that's the only realistic way a car manufacturer can design it to make robust accurate decisions. And so if maybe the first failure is a coolant temperature sensor that by itself on the FTP doesn't have much emissions impact. The FTPs run at a moderate temperature range, 68 to 86 degrees, you can probably disconnect the coolant temperature sensor, the car will run fine on the FTP, it will start up fine, you probably won't see any emission difference at all, but you start that same car at say 50 degrees outside or 40 degrees outside or 110 degrees outside and that coolant temperature could have a big difference. In a cold-start enrichment, you may even have start-ability problems, you may spitting and sputtering for a while and so just running the FTP might not show up a big increase, but other test cycles in the real world do. And once the coolant temperature sensor has failed and the system has detected it, it's gonna disable most of the other monitors because if it can't know what the temperature of the engine is, it's not gonna know if the catalyst should be warm and it's a good time to test it and see if it's working

or whether EGR should be up and running and they can test it. And so, once that first one happens, if we don't fix it, something else breaks, it could be heading down any one of these paths and we won't know about it. You know, whether it's a combination of multiple things that have added on and cumulatively they have a synergistic effect that suddenly drives it off. And so the impact of not fixing that one car, it really, the emission benefit could be any one of these path as a subsequent malfunction happens later in its life. And again, that adds to the complexity of trying to figure out how you calculate the emission benefit. This one's a little hard to read with the color here, but I talk about it's hard to figure out which ones fall into those different categories. The rapidly deteriorating ones, the gradual deteriorating ones. Here's a - I pulled a couple months of Smog Check data and - from 2005 and look at 33,000 stored trouble codes for cars that were failing and did some summaries to figure out which are the most common problems. One of the beauties about OBD is you can actually get the exact trouble code that's stored in the car and tell you the nature of the problem as opposed to just saying there's high hydrocarbon that you might get with an ASM test or there's high NOX, which might be caused by multiple things, you can actually get a pinpoint of where the likely malfunction is and if you look, these are the top

10 DTCs. I've got the DTC - the actually diagnostic trouble code listed, what percentage of the total DTCs are represented and, for example, you look at the first one, PO-300, it's 15 percent of the stored DTCs were at PO-300, and it's from misfire. And it's one of those when you have an engine misfire, you have - you can have raw hydrocarbons going right out the back, you usually have an increase in HC and CO, but depending on what's going on with ignition or fueling problems, you can also have a NOX increase. And if you just look at - I summed up the top 10 here and these diagnostics represent, as an accumulative column there, 54.2 percent of the total faults. So, of half the cars that are coming in the Smog Check and failing with this trouble code stored, they have one of these 10 fault codes. And if you look at these systems, we've got misfire, which is a major one that can do everything from causing you to have one a half times the emission to wiping out your catalyst in a matter of seconds. You've got catalyst faults, which I think everybody knows one of the most important control systems on your car and anytime catalyst decrease goes down, your tailpipe emissions go right up. Fuel system lean, you know, your - your fuel system is your primary emission control. Catalyst treats it up, fuel systems tries to keep the engine out of emissions low, the catalyst cleans up what's left. Evap leak, I think this Committee has

certainly talked about evap problems enough and pushing for the off-board pressure check to know the importance of evap emissions. Front O2, your primary system for fuel-system close loop, EGR, these are major hitters in your emission controls. If ask any technician to name off the five or six most important emission controls on today's cars, he's gonna name off catalyst and fuel system, EGR and O2 sensor without a doubt. He may or may not know too much about evap, but he should. But again, these are big hitters. These are not some little sensor on the car that has no impact. It's not some vehicle speed sensor that has no emission impact. These are, you know, half your trouble codes right here are big hitters. I wish I could give you an updated version of Doug's chart here that had numbers in the right columns filled in that gave you emission benefits and tons per day and cost-effectiveness and dollars per pound or dollars per ton and all that stuff. I don't. We are working on numbers. It is complicated. We have valuable data coming back from Smog Check now because we can break down the DTCs, we can look at faults, but even then, as I said, you can have catalysts faults that it might be rapid ones that went to 10 times the standard or gradual ones that went to two times the standard and - so there's a lot of - a lot of, you know, and we're working with out in fact modelers to try to quantify this. We're still bringing cars in. We will have

the numbers at some point and we are - I said I meeting with some of our staff internally tomorrow and - today and tomorrow to talk some more about this and get some numbers here, but the trend is still gonna be the same. Catching cars earlier, we're gonna bigger emission benefit out of it. Catching cars late - waiting until later, we're gonna get smaller benefit. The costs of repairs, the individual repairs are about the same. Yes, with an OBD-only program we'd have more repairs than we'd have with the tailpipe only. We'd have substantial reduction in emission reductions. Is that gonna make the cost-effectiveness better? You've got one side of the numerator and one side of the dominator, it depends on which is competing, but probably not. Doug had also presented this chart that I think was a little difficult to use, although, I/M people tend to love these charts and I see them at all the conferences I go to but he had tried to rank the cars from the highest emitters to the lowest emitters and kind of give you an increase here that showed what percentage, how many cars churned out - gave you what percentage of it. You know, we talk about - if you look at say 50 percent, he's here - you know, after three cars he got 50 percent of the benefit that he was gonna get out of all these cars, something like that. He spent some time talking on this slide about OBD had repairs that increased emissions after

they were repaired. So, I went in and I looked at the EPA data and talked to EPA about it. Three of these were cars that had the mill on for an evap problem, an evap system leak. That should not effect tailpipe emissions at all. If you fix an evap leak, those aren't emissions that come out the tailpipe, they come into the atmosphere through vent hoses. So then I started looking at actually the magnitude of these increases. They were all in the .1 to .01 gram per mile numbers, which is less than for these cars, 1 to 10 percent of the standard they're certified to. In a typical Federal test or FTP test, if you can get back-to-back repeatability of less than 10 percent on the same test, you're doing pretty good. Most people tend to think 10, 15, 20 percent is, you know, 10 or 15 percent is pretty normal. He's looking at repairs here that had, I mean, back-to-back emissions test that 1, 2, 5 percent difference that most people would chalk up to test-to-test variability from running the same test. He also talked about there's a lot - OBD identifies of, you know, marginal emitters or these cars that have small emission benefit. Again, there's evap failures in here that he didn't account for. We're not expecting evap to have a tailpipe increase or decrease after you make the repair. Not that we shouldn't make that repair, in fact, if you look at the impact of evap, you know it's even bigger. And I've got a slide about that. But it

didn’t even account for that, and so here he’s portraying some of these cars, at least six or seven of them, that had no benefit from making a repair if they all had evap and they had evap benefits. Not tail - they weren’t expected to have tailpipe benefits. You know, evap obviously is an important one. This is showing the contribution to the South Coast Air Basin from emissions - hydrocarbon emissions from vehicles where they come from tailpipe or evap. Somewhere near the 2010 timeframe, our fleet is actually gonna have more emissions come from hydro - from evap systems than they are from tailpipe. Evap is gonna cross and be even more important that tailpipe there, so I - discounting and saying they have no emission benefit is - really isn’t the right thing to say here. You know, they need to be accounted for some way if you’re gonna calculate the emission benefit and as I showed earlier on the top 10 DTCs, two of the top 10 were evap faults, so there’s a substantial number of them that need to be accounted for as showing some emission benefit because they certainly do have an in-use benefit, but they’re not gonna show up in a tailpipe number. One of the other things about these cars that seem to show no benefit on the FTP - OBD definitely is a different strategy and it really expands the coverage for catching excess emissions in use. You know, traditionally, in a Smog Check program, we’ve been limited to a two-speed

idle or an ASM test as an acceptable surrogate, acceptable in consumer cost and length of time it takes to do and it's intending to be a surrogate of the FTP or cover a range of the FTP and give us a good predictor of what it would do on the federal Test procedure. And really if, by design, tried to identify cars that are - because a large emission increase on the FTP. Phil had talked a little bit about it. You know, we used to target something that's two or three times the FTP standard would be caught by the ASM cut-points. FTP, of course, only covers a subset of in-use activity as well. As I talked before, it's a very constrained temperature range, from '68 to '86. It doesn't account for morning starts that are colder or hotter. The drive cycle has a limited acceleration. Most of your freeway onramps have much higher accelerations and loads. So the FTP only represents an area of the speed and loads that cars are operated in use. It doesn't really have any highway cruise operation. It doesn't have any freeway cruise operation, so you can false that impact freeway NOX emissions. A torque converter clutch stuck off. No impact on the FTP because you have very little steady state operation. But if you run a highway cycle, which is an emission cycle manufacturers have to run and calibrate and meet a NOX standard on, you'll see a 20 percent increase in NOX if you don't lock up the torque converter clutch during

that. So we have tried to patch that on the certification side on FTP by adding more things to the FTP. We added a highway cycle, we have a cold CO test, we have a supplemental FTP that covers high speeds and high loads, so we've been adding these conditions to make sure we cover all the in-use activity with certification tests, but the ASM and two-speed idle have all still been structured around the basic FTP and again are covering a subset of in-use activity. OBD threw that out the window and said if you've got a component that causes a measurable increase during any reasonable driving condition, you need to detect it. And so we definitely, we expanded the window. It's not just things that because you to exceed the FTP standards. If you've got a component that affects emissions in-use, you need to be able to detect a fault, store a code, and turn the light on when it's bad. So you are gonna get things like a torque converter clutch, like a coolant temperature sensor. They will have an impact in use. It might be on the highway cycle, it might during low-speed operation, it might be during cold temperatures. It will show up as a very small or not even a change at all on the FTP. And that's - that is - there's no way around that. I'm not gonna try to stand up and hide that or say that that's a bogus test or anything like that. It is in truth, because we went broader than we have with FTP when we did OBD. We covered the entire range.

Doug had also presented a slide here about the - from Colorado's data, what he had coined the lack of overlap problem and he drew these circles not drawn to scale and I found out later why, because it's very hard to find a computer software program that actually will draw these circles to scale unless you overlap them, because I tried, but you know, he portrayed a couple things and unfortunately, the text is kind of washed out here, but he had something like 8,000 vehicles in the mill on and 1,200 in the exhaust failures and, you know, only 268 that failed both. So, you know, we are catching two complete sub - different populations here, what's going on? And this is a bad thing. OBDs turning the lights on for all kinds of cars that don't have high tailpipe emission and it's missing all those that do have high tailpipe emissions. There's a couple things about Colorado data that are important to know. A simple one, it uses the IM240 test. Phil eluded to it a little bit. It is a different animal than ASM. You know, there's gonna be differences. Colorado doesn't have an HC or NOX problem. They've typically had only a CO problem. They have set up their cut-points, CO is the only one they consider marginally stringent. They have - they use a CO cut-point that is double EPA's recommended cut-points for the IM240. So it's twice as high was EPA's recommended. For HC and NOX, they use cut-points that are

between three and seven times higher. We couldn't get away with that here in California. We need - in fact, we probably get away with that on CO, but we need the HC and the NOX benefits. If you took the Colorado program and put in EPA's final cut-points, those numbers are gonna change dramatically because a lot more of those cars that are the mill-on - a lot more cars are gonna fail tailpipe no matter what. I said they have pretty lax cut-points. Maybe that was okay for them, they'd only had a CO issue, that was all they were attacking. But it's not very representative of what we're doing here in California and I don't think it gives you a very good insight into what is going here, what can be done here. I pointed to it earlier, Doug uses - he includes evap failures in there with no, you know, they show they have no tailpipe increase. He's called - a lot of times he calls these false fails. The mill's on, there's not a tailpipe increase. Again, we don't expect evap failures to have a tailpipe increase. So, I just want to point out that that data's not very representative of what California does. In fact, Colorado's even changed, it's not very representative of what they do either. But I tried to do the circles and I couldn't get a program that would actually draw them to scale, so I came up with a bar graph. I just took data from here in California, this is from the second quarter of 2005 and the Executive Summary and I tried

to put down, the yellow was the ones that failed the ASM tailpipe. Green is they failed tailpipe and OBD, so that's the overlap of the circles and then the blue are the ones that only failed OBD. As a disclaimer, I did include all the functional checks in with OBD. If you look at these newer cars, OBD failures dominate the functional failures, even though there's some with gas-cap failures and stuff like that that might get lumped in there, OBD is the vast, vast majority of them. And if you look at, say the 1996 model year, where as Doug was showing in Colorado, they had something like 8 or 9 to 1 OBD failures to I/M tailpipe failures. Adding the yellow and green together you can see we have about six to seven percent ASM failures, adding the blue and green together we have something like 12 or 13 percent OBD failures. So we've got in the neighborhood of two to one OBD failures to ASM. You know, it's nothing like nine to one or eight to one that he's presented with their loose cut-points. And one of the other things you might notice here as we get to lower cars, obviously we have fewer and fewer data on the newer cars with the exemptions the way they are now. One of the other things you'll notice is newer cars have a catalyst that's more powerful. It's less deteriorated, it can cover up a lot of things. So you can have up-screen problems that the catalyst can really soak up a lot of that. Move to an older car, when the catalyst has

more miles on it, it can tolerate less of that. You know, the same EGR fault on a car five year later can have a much bigger tailpipe impact. This overlap or lack of overlap issue that Doug presented, it's been studied quite a while. I participated in a FACA, Federal Advisory Workgroup, we've talked about this. It's been through everything. EPA spent a lot of time looking at this. Certainly, neither test is perfect. OBD or tailpipe, just like we've had discussions about two-speed idle and ASM and whether we should be adding and doing two-speed idle and ASM. Certainly we know there's cars that two-speed idle will pick up that ASM passes and vice versa and trying to weigh the differences between the added test time and cost and if you could figure out exactly which cars would fail (unclear) only have them do, you know, you'd have the best of both worlds. Some differences are expected. You're never gonna see tailpipe increases or decreases from evap emissions. And one of the things that I want to talk about and Phil had eluded to a little bit and might explain some of why his data shows what it does it, ASM is not gonna be able to the catch lower emission vehicles that we have today anywhere near the stringency that we've identified cars before. I think this will help explain - even though he cut it off - his analysis off at '95 and older, you'll find even in that time some new standards were coming in. ASM we use typically the same

standards in that age group. But you might find cars like a Honda that can be at 10 times standard it will certify to, which is still cleaner or about the same as a car certified - a ‘93 car certified to a dirtier standard. And I have a slide on that but we are gonna be approaching the limits of capability on ASM pretty soon to catch cars that are reasonable, multiple or standard. I said with the lack of overload EPA spent a lot of time about it. EPA did conclude that an OBD II-only program got them just as much benefit as any tailpipe only program and that was excluding evap. They didn’t even add in evap and they said tailpipe versus OBD will get the same benefit or more. You throw evap on, it’s just icing on the cake, which it might be big icing on the cake, because it’s a big benefit. And one thing that people maybe not realize is in the past, we’ve had ASM cut-points that we’ve ratcheted down over time and eventually approached final cut-points or gotten more benefit out of and Phil had presented earlier on, you know, maybe there’s some room to ratchet some more down. We’re not actually using OBD to the fullest potential right now. OBD, while you can’t really change cut-points, one of the things we do with OBD is there are flags in there called readiness monitors that are used to identify if somebody has disconnected the battery recently or cleared fault codes and the intent that these flags were created was to know if

somebody was trying to cheat the system by stopping around the corner to disconnect their battery to clear out the memory. These flags change are not ready indicating, hey, the system hasn't had a chance to check itself out. We are in a situation right now where we, as a compromise, we developed this nationally for people who legitimately have their car repaired the day before or the day of or two days before their repair and only drive it five or 10 miles back to the repair station, trying to distinguish those people who haven't given their car enough time to run all the monitors and check itself out and say I'm okay, from somebody who literally is disconnecting their battery around the corner. And so right now, we have - there's multiple readiness monitors on a car, somewhere between three and seven, and we allow up to two of them to be incomplete. So there is a loophole, if you want to call it that where people can actually disconnect the battery and clear codes, get back through the inspection before all their monitors have checked off and said, okay, I'm perfectly okay. So that's one of the things that EPA and we have been continuing to look at is ways to maximize the use of OBD. Trying to balance consumer inconvenience by telling them you've got to drive around for a week before you come back for Smog Check, versus catching the people that are actually not fixing the problem. And we did some study, we did some

study with UC Riverside, the C-cert and they did some analysis for us on looking at OBD records and figuring out how to tighten that criteria up and what the benefit would be. We focused on cars that were failing the ASM test, but were passing the current OBD inspection, which again allows up to two of these monitors to be incomplete. And so the bars on the left are - we looked at separately for ASM fails and ASM gross polluters and with the system we have today, we're flagging about 20 percent. The red bar on the far left here is flagging about 20 percent of the cars that say are ASM fails, 20, 25 percent of them, OBD is also failing. Of the gross polluters, we're about 50 percent of them. So 50 percent of the cars that fail gross polluter, OBD is also failing. If we tighten up that criteria to say all the monitors had to be complete. Instead of two incomplete, you could have zero incomplete, those numbers will jump up to say 50 percent for fails and 75, so clearly if you give the system time to actually run all its monitors, you can close the loophole on some of these people. We looked at another version which also looked stored trouble codes as another criteria. That might be possible. It inked it up a little bit more. And in that same study, we started to look at, okay, so we can't - maybe we won't get all the cars that ASM says is failing, what - or how much of the emission benefit of the cars that's failing. So we've actually brought these

cars in and studied them. Even with the current program where we have this loophole, even though we're flagging only about 25 percent or 50 percent of the eight gross polluters that say they're fails, we're flagging the dirtiest ones. We're getting 75 to 80 percent of the benefit. About 60 percent are NOX, about 75 percent of HCs. So even though we're flagging a quarter to a half of the cars, we're getting the biggest emitters, so we're getting most the bang out of the - so in the overlap, we're getting most of the highest emitters. If we tighten up our criteria and said, you know, in zero readiness, all the monitors had to be complete, we can jump into the 85, approaching 90 percent and move NOX to up above 70. In this revision three, I'll talk about some more and some further studies, but we actually started looking at a plan we're we could use OBD as a clean screen or a fast-pass mechanism where we sort of have a hybrid program and I have a couple slides on that where we would sort of combination and try to get the best of both worlds and figure out which ones we should direct to ASM and OBD as opposed to just OBD. Doug, I said this is Doug's slide, he presented this ranking of cars that were, you know, OBD failures and showing that there's a couple big hitters that account for most of the emissions and a lot of ones down here and he'd also had, you know, they were outweighed by two vehicles that OBD had missed and one of

his conclusions was OBD misses the dirtiest of the cars. When you look what his graph - his picture here that had all of the vehicles on it, the two that OBD missed are here. I don't know if I would consider necessarily this one as one of the dirtiest cars, it's down here pretty low on the tailpipe numbers. He did have one way up here, you know, nine - on his scale here of (unclear) plus a 10th of CO plus a NOX. Wouldn't you be surprised to know that's a Dodge truck with an empty catalyst that has been recalled? So there is reason for that car and the catalyst being '96, '98, '99 percent efficient in converting what's coming out of the engine, one truck with a missing catalyst is worth, you know, 50 to 60 other cars. So, his analysis that it missed most of the dirty cars is dominated by one truck that's missed that was identified as OBD non-compliant back in '99, finally had an enforcement case settled earlier, just late last year. So, again, I - you know, whenever you're using such a small dataset as what he'd look at here with two cars and six cars, you can kind of get a skewed view of what's going on. One of the programs that we've been doing at ARB in conjunction with BAR is looking at all these cars that ASM says are dirty and OBD continues to pass. We can theorize about what's going on, we know some of them are probably using that readiness loophole and getting through. We know there's some not perfect OBD

systems, but we spent a lot of time analyzing this data. We started with gross polluters, and said hey, we're only flagging 50 percent of the cars that ASM says are gross polluters. What's going on, is OBD missing them all, are they not dirty, are they really dirty. So we brought in 37 of these vehicles. We solicited them from Smog Check stations. If they had a car that was eligible, they called us, we talked the owner into loaning us their car, we gave them a rental car, couple hundred bucks, for the station for recruiting them for us we gave them a free tank of gas, that kind of stuff. A costly, costly proposition to bring these cars in and we would baseline test them. We'd run ASMs and FTPs and all that kind of stuff and then we'd send them out for undercover repairs to Gold Shield stations, so the stations didn't know they were an ARB car, they weren't be supervised. You know, we'd get repair estimates or have them make repairs and bring them back in. So these are cars that failed ASM as gross polluters, but passed the OBD inspection. If you look at the analysis, it's not that different from Doug's as far there's a couple cars here that we're already at 50 percent of the emission benefit after six or seven cars. So you've still got cars that are a couple high emitters, you know, or a portion of the fleet making up the vast majority of the emission benefit. We had zero benefit, like Doug had said we had zero benefit from a

bunch of OBD cars or very little. We had zero benefit from 14 of the 37 cars. Again, these are all cars that failed the ASM as gross polluters out in the field. So these are cars that we brought them in our lab, they were never dirty again. We sent them out for undercover repair. They either didn't make repairs or they made repairs and got a passing certificate and we tried to treat this just like a consumer would do. We'd walk into a station and say my car failed, you know, I don't know what's wrong with it, can you figure out what's wrong with it, call me. You know, I need to get a Smog Test, we used Gold Shield so a lot of them could test them - fix them, test them, and there were just some non-repeatable fails there that we'd try everything to make them dirty. We looked for preconditioning problems, we tested them cold, we tested hot, we tested them pushing sideways on the car to try load up the dyno, we tried standing on the scale to give them heavier test weights, we tried lots of things and really struggled to - on these vehicles to have anything go wrong. We also had a guy clean pipe one for us. We didn't ask him to, little does he know he clean-piped a car for the Air Resources Board and BAR and probably not the smartest thing to do. But in looking at these gross polluters, you know, we said, well what's going on with these cars. 45 percent of the benefit, all the benefit we can get out of catching all these cars, 45 percent of it

happens to 96 or 99 Dodge, Jeep trucks. Catalyst problems on those vehicles. This was a big issue. It was a big case. That is obviously more than their market share. Dodge and Jeeps do not account for 40 percent of the cars on the road, or even 30 percent of the cars or anything like that, so they are a disproportionate number of this benefit. One note on here, we have an after-market catalyst that are sold here in California that don't meet the same standards as OEM and that's been allowed for a long time. We have a breakpoint with OBD II cars in 1996 where we had set a higher level for the aftermarket catalyst. They didn't have to be as good as the OEM, but they have to be a lot better than they used to be. And not that many have been certified yet, less than dozen have been certified and they are not as universal as the old cats so there's for a lot of these cars, there's not an aftermarket catalyst available right now. We still found a substantial number of these aftermarket catalysts being illegally installed, the $99-type stuff. A lot of the cars we took in there, that's the first repair, again, these are the cars that have no OBD fail information. So these are cars that you take into the technician and all he knows is that it's failed Smog Check and OBD says I don't see anything wrong. And when you do that to a technician on today's complex car, almost nine times out of 10, he's gonna come back with it needs a

catalyst. Whether that's the right repair or not, that's what he's gonna come back with. I don't necessarily blame him. It can be costly and expensive to go to the trouble of diagnosing these cars and you may hit a point where you're spending four hours to diagnose it when you could have put a catalyst and two other parts on it for that same amount time. These guys are not in a good situation. But if you give them a car that's failing with no OBD information about anything failing, they are gonna struggle. You know, it's one of the problems we tried to address with OBD is giving the guy repair information. And we certainly found some of these cars that came in with one or two monitors incomplete. By the time we run it through our program, the next monitor's run, the lights on for the catalyst, the lights on for this or that and we'd often would clear those cars, get them back into the situation they were at when they failed the Smog Check and take them into repair stations so he's faced with the same thing we are. Some of the techs were smart enough to go, you know what, catalyst monitor hasn't run. Maybe I need to try to exercise that or - you know, EGR hasn't - you know. And so we've definitely had some successful repairs, but by and large, these were difficult repairs for these guys to make. Repair costs accordingly were high. Our average, instead of the numbers we were seeing before were $526. You know, calculating the way EPA

did, the true average is somewhere between $395 and $657. Just about half of them were repaired under the $450 cost limit. So we had at least two of them where the guy came back to us and said you know what, I haven't been able to fix it. You've spent $600, you can go to the referee and get a waiver now. We had guys who got so frustrated in not being able to fix the car that they did extra repairs that they didn't charge us for. We had guys add extra catalysts onto the car trying to get it to pass before they gave it back to us. But they didn't charge us for it and didn't tell us about it. Only when we started looking at the car, we went, wait a minute, that catalyst didn't use to be there. So there were some diligent mechanics trying to find a way to get it to pass.

CHAIR WEISSER: I want those names after the meeting.

MR. MCCARTHY: But, you know, and part of the cost is driven up. Some of these cars, I mean, 16 of them, so almost half of them, ended up having an OEM cat replaced. And OEM cat, since there's not a lot of aftermarket cats available for them, the OEM or the original equipment cat, they tend to be expensive. $700 is not uncommon, $700 or $800. If there were aftermarket cats available for all these cars, they're running around $300, $275, $300 for the OBD II level aftermarket cats that would bring the cost down. It would bring the average repair cost down almost 20 percent. So,

you know, as we are pushing the aftermarket cat manufactures to develop more compliant cats, we are - we will see those cost numbers drop down. But these are troublesome cars to fix. And they're not all dirty. This shouldn't be a surprise to you again, the data from the second quarter of 2005 that just shows by model year, the failure rates, you know. You see some of the same trends where the failure rate goes up and then it starts to fall back down perhaps like you saw with the 1987 Golf, although we would say you were still on the climbing rate for '87 in here, but - and here's the start of OBD II and you could see we went from an OBD-I system and a tailpipe and visual functional to suddenly checking a lot more things. We do have a bump in the road there as far as there is a lot more things subject to the I/M test there. But the other thing is, the vast majority of our failures are coming from '95 and older vehicles. There's, you know, '75 percent of the fails. And if you look at the emission benefit, I'm sure it's even more than that because these are the older cars that were certified to higher standards, so there's higher grams per miles. My point is we need ASM and we need ASM for a long time, because it is - the primary benefit we're getting out of ASM is on these '95 and older cars. It's gonna be that way for a long time. This would tell us we're way out here. You know, we need dynos and we need ASM tests because that's

the best test we know of for these vehicles. But, when you start going forward, ASM is gonna have some issues with the cleaner, the lower and lower emission cars. I apologize for the color of the font here, but these bars are the hydrocarbon and NOX certification standards, the federal test procedure, FTP standards, and the far left one is Tier-0, it goes to Tier-1, and then some of our categories, TLEV, LEV_I, ULEV, SULEV, which are ultra-low emission vehicles and stuff like that. These are - Tier-0 and Tier-1 are most ‘92 through ‘95, ‘96 cars are all Tier-0 and Tier-1. And ‘96, ‘97, we started to get some TLEVs and then LEVs, by ‘99, there’s a lot of LEV_Is. By 2002, there’s a lot of ULEV_IIs. By 2010, we’ll probably have 30 percent SULEV. So we - and in one model year, manufacturers can certify mixes of these things to meet an average, so they might have a Corvette certified at a TLEV and a Chevy Cavalier certified at a ULEV in combination of that stuff. In ASM, for ‘92 and newer, we use one set of cut-points. We do not differentiate between any of these emission levels. So even so, these cars are certified to emission standards and designed to emission standards that are 1/20th, 1/40th of what the ‘92s and ‘95s were, we’re using the same ASM cut-points. I mean, it’s not hard to figure out. It’s relative cut-points. If we were targeting to try not to false-fail any cars for Tier-0s and Tier-1s and don’t call anything bad

that's less than say two times the FTP standard or something like that, instead of two times the standard for Tier-0, Tier-1, that's gonna be 20, 30 or 40 times the standard for a ULEV or SULEV or something like that. One solution would be to tighten up the cut-points for these newer cars. That's one thing Phil was looking at is maybe identifying some of these cars and they can go to lower cut-points. One the - again on the bar here on the far left is a typical ASM cut-point for these '92 and newer cars with an HC level around 40, 50, 60 ppm, a NOX cut-point 400 to 600 to 700 ppm. We tested our lab LEV, a LEV_I, a ULEV_I, and a SULEV. We got emissions all under 10 and 15 ppm for all pollutants. I - you know, Mr. Nickey can certainly weigh in on this but if he were to have to fix cars to a cut-point of 8 ppm or 6 ppm hydrocarbon and -

MEMBER NICKEY: Zero.

MR. MCCARTHY: You know, there's not even tests - your '87 VW Golf went from 53 to 101 ppm HC 65 miles later. Now that's bigger variance than I normally see, but we are not going to be able to hold these things anywhere standard. You know, when we FTP test these cars, and I'm getting - sometimes the mouse clicks and sometimes not. If we use the SULEV as the baseline and look at the FTP level, when we get to a - I'm gonna try up here. Am I just not getting the wireless?

MEMBER NICKEY: Maybe your battery's dead.

MR. MCCARTHY: Can you give me two more clicks? Yeah. The ULEV_I one car is roughly on FTP about four times the emission level of a SULEV and a LEV_I is seven times the emission level of a SULEV. Yet ASM reads no meaningful difference between those. So, I mean, we're talking about cut-points that would - that are just down in the noise level on the ASM analyzer and it does probably - when we spend in our lab to test SULEVs, we have, you know, $2 million dynos and we have $5 million in instrument trains and analyst equipment to measure those things reliably. You know, we're not gonna get anywhere near the same precision in the lab or field-grade type of equipment. So, again, I just point to that we need to be aware of this and - all right, you're gonna have to let her go. Here's a slide that Sylvia presented to you guys before back in January of 2004. It kind of summed up some of the inspection costs and stuff like that and I just wanted to point out that inspection costs in this calculation, inspection costs account for 70 percent of the total cost of the program. You know, repair costs account for around 30 percent. So Doug had focused some of his analysis on, you know, ways to reduce repair costs. Yes, it is going to reduce emission benefit, yes it is gonna reduce - you're gonna take some repairs off there, but even if you cut repairs in half, you're gonna cut emissions substantially and you're not gonna reduce that

much of the overall cost of the program. If you can attack inspection costs, you could make a substantial difference. Ideally, we can attack inspection costs and not reduce program effectiveness. And that leads into one of the continued studies we started with looking at gross polluters, we're continuing to look now at just normal fails and see if we're seeing anything different in the analysis. So we're recruiting cars that fail at Smog Check stations and right now we're in a situation where we're getting the best of all worlds. We're throwing every test we can at the book, except for two-speed idle, we're throwing OBD at it, we're throwing ASM, maybe we're not using OBD as tightly as we could, but we are throwing every test and every test we throw at it, the more chance you got to catch them for a fail somehow. One of the approaches that we're looking at that seems to show some promise is using OBD as sort of a fast-pass or clean screen. So if we can tighten up the OBD criteria as far as require all the monitors to be complete or basically have OBD say not that everything looks okay, that everything looks great, then we say okay, give it OBD only and move on. If it says OBD looks okay, like we have with today's program, then let's throw it through the whole - throw everything we got at it. Throw it through the whole program we have today. That type of program, you know, we can target, we can get probably two-thirds or more, probably

70 percent of the cars getting an OBD-only inspection. (recording distortion) The consumer's gonna - there's gonna be pressure. Somebody else is gonna figure out if two-thirds of the cars are being tested in five minutes, he's gonna lower his prices. Two-speed idle is shorter than ASM, it had a shorter test. I think we'd see prices come down. Then somebody would figure out a pricing structure that would work and you'd probably see all kinds of them. In that program, if we could put two-thirds or more of them through an OBD only, then divert the rest to a tailpipe plus OBD, you know, that's - identifying the cars that would most likely be dirty giving them more tests. In fact, if we could add even more tests, we might it's cost-effective because we're taking a smaller amount of the cars and putting them through more tests, we might find things like it's even more cost-effective to add two-speed idle just to that because you're adding just to a small set of them. So you might be able to get, you know, the more thoroughly we can test the cars we think are dirty and the less time we spend on the cars that look clean, we're looking at emission data analysis, it looks very promising. We look like we can capture 85, 95 percent of the benefit we're getting from subjecting all cars to both tests by subjecting like just a third of them to both tests or less, and two-thirds of them just the one test. You know, we're still working the

emission numbers, I don't have tons per day and what it would lose. It should be smaller than what it was with the four and five and six year exemption. You know, we know we don't want - it's a show-stopper pretty much. You know, we have some preliminary numbers, but so that's one of the things I'm meeting with people here internally to try to get you a credible number for that because we wanna come into - that's the missing piece of the puzzle we have right now is what is it gonna translate to in a tons-per-day loss. We really don't want any back-step at all right now. You know, and it becomes a delicate balance between cost-effectiveness and emission benefit. But, we think there's a promise there and like I said, we're continuing to study that and hoping that's gonna prove out. That brings me to the end. I'm sorry it has taken so long here, but I mean, OBD, we believe OBD is working as intended. We spend a lot of time in the field making sure it's doing it and updating the requirements. It is very different from tailpipe. I stress that, I don't mean to sound like I'm preaching to you or anything like that, but it is different. It does take a different attack at finding broken cars and a comment earlier, you had asked somebody - Phil, if tightening the cut-points was gonna get some marginal failures and whether those were gonna be hard to repair and that's been the criticism of OBD is it's gonna fail lots of marginal

failures that aren't that high on FTP and I talked a little bit about why FTP isn't the end-all to tell you everything. But, with OBD, you're not gonna - it's not gonna be hard to repair. OBD does store a code, turn the light on, narrow it down to a likely area. So, again, when you measure FTP, you might call it a marginal emitter, but it doesn't mean it's one of those that's harder to repair because you're scratching your head, going well, there's five things, partially deteriorated, which one do I go after. OBD will call one of them out as bad because it's shorted - open circuit problem like that. And -

CHAIR WEISSER: Mike -

MR. MCCARTHY: Yes?

CHAIR WEISSER: - you've been a remarkable young man in the last 65 minutes to present us with this much information without taking a break for a drink of water or anything. I feel like you have another couple of hours of stuff that you'd like to chat with us about.

MR. MCCARTHY: No, I don't.

CHAIR WEISSER: And on -

MR. MCCARTHY: I did want to present to you that, you know, a kind of a thorough picture and let you know I am available. I work for CARB, been working for a long time. I said anything with OBD comes through my shop, I mentioned a report from Mr. Escalambre. I know Rick, he's attended

training classes I taught. He's asked me to review the manual that you were talking about for training procedures. It's a small OBD world and I -

CHAIR WEISSER: Well, there are lots of questions I'm sure people on the Committee will have for you and the public. And we'll get into them. I suspect we'll be seeing more of you in the future. Let's start down at the left. Roger, nothing. Paul?

MEMBER NICKEY: Wait, wait, wait.

CHAIR WEISSER: Oh, Roger. Okay.

MEMBER NICKEY: You didn't give me time to grab.

CHAIR WEISSER: Well.

MEMBER NICKEY: I just had one brief one. I keep seeing the repeat of evap information and how important it is. Do you have any idea, of all the evap failures that keep popping up, how many of them are loose gas caps?

MR. MCCARTHY: You know, that certainly the car manufacturers spend a lot of time working on this too because those are the ones they hate for warranty repairs. When it comes -

MEMBER NICKEY: I know but -

MR. MCCARTHY: - back for consumer action. So we do have - most manufacturers have set up a separate diagnostic strategy to try to identify gas caps and in most, say 2001 to 2002 and newer cars, a lot of cars have a separate indicator where they will flash a warning light to the driver -

MEMBER NICKEY: Yes.
MR. MCCARTHY: - check gas cap. And it's not for any emission leak they detect. They actually have separate strategies where they can pinpoint it down to they think the likely area is the gas cap and they can do that with complex things like, if it is a loose gas cap, when you draw vapor through it, you're gonna pull up more - more HCs right off the top of the gas tank as opposed to if it was a leak in a vent hose. Then there's some complex strategies about what they do and the size of the orifice. So, manufacturers are trying to test that way to minimize the number that come in.
CHAIR WEISSER: They've also changed the gas cap itself so that it's a -
MR. MCCARTHY: Lot of manufacturers spend time with it.
MEMBER NICKEY: Yeah, not for the better either.
MR. MCCARTHY: Yeah, a lot of them went that way and bailed back out of it because they just didn't like it. But manufacturers spend a lot of time trying to figure that out. We've looked at it, too. I have never seen any concrete data or any credible data.
MEMBER NICKEY: Well, I would just hate to think that we decided that it was so important that we're going to do evap testing when it really turned out that a lot of it was loose gas caps.
CHAIR WEISSER: Yeah.

MR. MCCARTHY: Certainly from past - when we pursued and evap requirement, we had done it because we had done off-board testing for long years on all our surveillance cars. That's one of the things we do is - when we do that we pressurize through the gas cap. So, we would not be catching any cars with leaking gas caps.

MEMBER NICKEY: I'm talking about statistically.

MR. MCCARTHY: I - I know, we did that. But when we did that and found the failure rates that were out there, they were substantial and they were excluding all gas caps.

MEMBER NICKEY: Okay.

MR. MCCARTHY: So that's the thing that I could have that sort of portrays - that points in the direction. You know, there's other evap failures, purged faults and stuff like that, that obviously aren't' loose gas caps. But I - for the evap leaks, I can't really give you a good idea.

CHAIR WEISSER: Anything further, Roger?

MEMBER NICKEY: That's it.

CHAIR WEISSER: Paul? John, you okay? Yeah? Dennis?

MEMBER DECOTA: Michael, basically the issue of one of the industry issues has been getting current and easy-to-obtain repair information with regards to OBD II systems for the aftermarket as a whole, not - why hasn't, I mean, you - you're a master of what you - you seem to be a master of OBD II. Why haven't you proposed regulations, because the Smog

Check law does mandate as far emission-related repairs that it be made available to the industry, a library where the automotive aftermarket can come to a web-based program and readily have available to them this repair information and possible failures that may be at that certain diode or that certain sensor, that type of thing, to check. Why haven't we, I mean, why haven't we gone that step?

MR. MCCARTHY: You know, I've - my former boss at ARB and one of his staff now are the ones that push through the service information world from the ARB from the Burton bill that was passed and they codified it into regulation. I have been involved in that a lot. In the past, we never, we never prescribed what a car manufacturer had to have in a service manual. You know, and a lot of service information rules in the past targeted - we're still not gonna tell you what you have to have in your service manual, but whatever you do have in it you have to make it available to anybody who's working on your cars. So, you know, the catch phrase on that one is if you make crappy information available to your dealers, you can make crappy information to the aftermarket. But this doesn't mean you did either. With this Burton bill and the information rule, it was the first time we actually, with that bill, it proscribed and said that you have to have a description of how your OBD monitors work, you have to have descriptions of the typical enable criteria to run that

monitor, typical malfunction criteria, if you have atypical models, you need to specify those. And it was the first time it went in and actually said, I don't care if you weren't on planning on providing this to the dealers, or you don't want to tell them, you're gonna need to make it available. And so, I think we did take a very proactive step in - albeit, late, because we did it two or three years ago, not in 1995, but it was the first time we actually put in there you have to have this minimum amount of information to help a technician figure out how the system works. You still see differences. You know, I use the websites constantly, because when we're working on cars and that's one of the QC procedures we use to check and I tell you, there are some manufacturers that go out of their way to give good service information and it's neat and it's clean and the dealers can find everything wrong and the aftermarket can find everything, and there are manufacturers that I don't know how their dealers fix their cars.

MEMBER DECOTA: I understand.

MR. MCCARTHY: And so, I guess it's been a fine line with providing stuff free, you know, mandating they make stuff available for free versus mandating they make stuff available that's good. And one thing I have noticed is consolidators like All Data and Mitchell (phonetic) and out of the OEM service information websites available, those

manufacturers - those have gotten a lot more competitive, they have a lot more detailed information and I think they are becoming a more comprehensive, rather than a consolidated skimpy - in skimpy cases, they have gotten a lot better, and I mean I see those as an essential part of a technician's tool box as having access to service information.

MEMBER DECOTA: Right. But you have much more information with regards to performance of that system than the average shop does. You also have the ability of oversight. Why not take and go forward in the next budget meeting and recommend that you put together some type of library - online library so this industry would pay you and pay the State of California for that type of information versus being forced into a zillion different areas trying to find information. I mean, you have the ability to be the traffic cop here. You know, I mean -

MR. MCCARTHY: Yeah, but -

MEMBER DECOTA: I don't know how it happens, but that's one thing.

MR. MCCARTHY: Okay.

MEMBER DECOTA: The other thing is, I know that in many years on this Committee that even before OBD II and now we're getting into OBD II repairs.

MR. MCCARTHY: Right.

MEMBER DECOTA: Okay. The industry - they're out of warranty.
MR. MCCARTHY: right.
MEMBER DECOTA: They're starting to come out in the field and we're performing these OBD II repairs. We know that, you know, basically under these repair scenarios that there is a great deal of interpretation problem for the technician, you know, that needs to be clarified some way. Especially when it comes to interacting with the parts issues, i.e., cats, and everything else.
MR. MCCARTHY: Okay.
MEMBER DECOTA: And I think that's a scenario that needs to be regulated. I think that's a scenario that needs to be overseeing even more so and I know you have regulations now on cats, but there should be issues that, you know, if you use illegal parts, you should lose your right to perform these tests. There should be some meat put in there. Okay. The last thing is that emissions on non-OBD cars, we know, I think and forgive me, Steve, maybe you weren't but I'm thinking back many years ago. You did a report for IMRC, that basically, I believe, and I don't know if it was you, Steve, that showed that a car seven years or older - I'm talking about non-OBD II cars referenced in Jeffrey's presentation, the emissions performance fell off the table. Okay. Deteriorated. The golden year was seven years and older and I mean they just took. That information should be

made available to Jeffrey on his issues. I think it would be helpful. But this industry, I think, wants to perform. Okay. But there are monetary reasons that create hurdles that it can't perform in the repair scenarios as it should. I think Government needs to step in and help regulate. Okay. And I think we could do a lot better in reducing emissions if we could get timely and easily-accessible repair information on these vehicles. And I would hope that your Department is working in that area.

MR. MCCARTHY: Certainly, you know, one of the things that you talked about, the aftermarket cats, that actually is one that's in my section's responsibility. I'm the one that's supposed to back to the Board in a couple months.

MEMBER DECOTA: (inaudible)

MR. MCCARTHY: We have a higher standard for a catalyst. It's in interim agreement actually right now. We're getting the catalyst manufacturer certified, too. We want to codify it into regulation. In aftermarket, other replacement parts, we haven't gone down that path, you know, to look at. It's sort of a self-process for a manufacturer if he determines his own part is a replacement part and functions identically. We can challenge him on it, but he doesn't come through us to certify. So, auction-sensor manufacturers don't come through us to certify and that's one that we did some recent studies that maybe elude to the

fact that we need to step in and do some stuff there to try to get a higher level of standard. I guess, service information we talked about a little bit. Certainly, I think we're looking out for you. Some people think the check engine light comes on for just about anything these days. We're trying to send more repairs your way.

MEMBER DECOTA: (overlap) the consumer.

MR. MCCARTHY: Yeah.

MEMBER DECOTA: It makes for a bad repair.

MR. MCCARTHY: I agree and that -

MEMBER DECOTA: Because you can't information.

MR. MCCARTHY: And I agree and I do take that to heart because we did in this undercover program, although we were focusing on cars that passed OBD, when you take cars in and there is still a basic level of information that's not there in technician training and I think it's gonna be an age-old problem. It's always gonna be there, but there's gotta be a better way to it. I said Rick Escalambre has contacted me to try to help in reviewing some of the training material for BAR licensing and stuff like that. So, I've tried to be involved in those things to some extent to help out.

CHAIR WEISSER: Mr. Pearman?

MEMBER PEARMAN: First, I'd like to try and understand a table you had, tightening up also gets most of the ASM emissions benefits.

CHAIR WEISSER: Which page are you on?
MEMBER PEARMAN: Page 12 in our book. And I think it was related to the overlap discussion you had.
MR. MCCARTHY: Correct.
MEMBER PEARMAN: And so the way I understand it is that you're saying at least, I guess, for the '96 and older cars, if you just had - we'll call them in because of OBD failure, you get X amount of emission reductions. If you looked at cars that were calling because they failed the test and those repairs and emission reductions, you get a different number, and the first number, the OBD number is 70 percent of the second number from the testing. At least for the '96 and older cars.
MR. MCCARTHY: Well, that's the - that's the overlap area. OBD's gonna call out a number of cars over here, most of which ASM did not also fail, so there's a population of OBD fails that are gonna get emission benefit that ASM did not flag and that chart was specifically looking at the second set of population, which is cars that fail ASM. How many of those also got detected by OBD. And so I was focusing - that's not the whole benefit of the program, because there's still another set of population of cars that fail OBD and passed the ASM test that are getting us benefit right now that I didn't - I was just focusing on for these few that are the ones that are failing tailpipe that ODB doesn't

fail. You know, I'm trying to look at that subset of cars and figure out what's going on there. I'm not sure I'm answering your question yet.

MEMBER PEARMAN: Well, but again, 70 percent is overlap, but then there'd be some benefits because OBD would catch something from the - that ASM test would not have caught.

MR. MCCARTHY: Correct. Correct. So -

MEMBER PEARMAN: So, you know, maybe that brings the number down to -

MR. MCCARTHY: Right. That could be even equal or even bigger magnitude or a smaller magnitude, you know, so in the total program, OBD might be getting us 90 percent of the benefit and the extra ASMs getting us 20 percent or -

MEMBER PEARMAN: So in other words, and again, OBD can't do much for the pre-'96 cars then.

MR. MCCARTHY: Right. OBD II didn't go into effect until 1996. There was an OBD-I system from about '93 through '95, but it's very, very, very limited in it's capability and usefulness, which is what prompted us to go to OBD II immediately.

MEMBER PEARMAN: So, I mean, putting aside the effect on repair stations and industry, which you can't do, but let's assume arguendo, what you're saying is this monstrosity of a testing program we have is designed to catch 10 percent of

the post-‘96 emissions losses and all the pre-‘95. That’s the purpose of it basically.

CHAIR WEISSER: Can you say that again, Robert, I’m not sure I followed that.

MEMBER PEARMAN: Well, if they had this overlap of the OBD, you’d be getting 70 percent of the post-‘96 emissions reduction anyway, without any testing. Correct?

MR. MCCARTHY: If we went to OBD only, an OBD-only inspection.

MEMBER PEARMAN: Exactly.

MR. MCCARTHY: You still gotta bring them in and force people to respond to the light.

MEMBER PEARMAN: Right. Sure, that 70 percent failing.

MR. MCCARTHY: But you’re right. If, you know, you could get, with OBD only you could probably get most of the benefit that we’re getting right now. You certainly could get just as much as if you’d just done tailpipe. But tailpipe plus OBD gets a little bit more and yes, it’s not that much more. Just like if we probably add TSI - two-speed idle to ASM, we’re gonna get a little bit more, but it’s probably not gonna be 50 percent more or something like that. You know, you get a little incremental benefit and we’re trying to calculate that benefit right now, but yes, this data would suggest that if we could tighten up the OBD inspection criteria and get - or use one of these hybrid clean screen, fast-pass type algorithms to use OBD only for part of it, we

think we could get the - we'd get it all for - but we'd still - even in that hybrid scenario, we'd still be subjecting some of them to tailpipe plus OBD.

MEMBER PEARMAN: Well, that was my other question because you were suggesting is since that maybe in some ways in such a scenario, the savings for maybe not having the needless test, if you would, could be used for more focused testing on certain types of vehicles. Another alternative though, would be to take some of that money that was saved from the nonessential ASM testing and buy a lot of those older cars and just get them out of the system.

MR. MCCARTHY: Right. I mean, that's, you know, sort of the path the Carl Moyer funds and all kinds of stuff where we try to get more effective -

CHAIR WEISSER: Yeah, it's also a question of in whose pocket is the money.

MR. MCCARTHY: Right. If anything we probably need to lower the scrapage fee for 1987 VW Golfs because they seem to be going away pretty fast on the road.

CHAIR WEISSER: Okay.

MEMBER PEARMAN: The other question I had was you were kind of, I guess, redoing one of Doug's charts and summary data updated emission benefits and you had some costs per repair. And my question went to whether your estimates reflect the real world, because you said that the OBD would, you know,

fail on one item, but there might be other items wrong with the system in the car that either would have happened over time or that will now be caught when the car's brought in. So, in your repair costs are you just saying if there was a front O2 circuit failure, are you just looking statically at what it costs to fix that, or are you looking at the real world that a repairman would see, not only that failure, but others and would force those repairs and is that what you reflect in your chart?

MR. MCCARTHY: That chart was based on the EPA's data, their high-mileage data. So they were running the program and as Doug had noted, the technicians that were doing the repairs were under the - not to say the supervision, but they knew they were being monitored for repairs. So there is some concern about what that translates to. In their program scenario, the sort of domino effect where if there's one fault and they fix that and something else happened, in their test sequence, they probably would have shown up in their test sequence and they would have kicked it back into the repair loop before it got out.

CHAIR WEISSER: But yes or no. That number that's reported is the initial repair, it's not the - it's the whole -

MR. MCCARTHY: It was the whole repair.

CHAIR WEISSER: Okay.

MR. MCCARTHY: There was only - I believe in the first 153, there was two cars they got a comeback on -

CHAIR WEISSER: Okay.

MR. MCCARTHY: - that would have had perhaps another repair show up later that wasn't included. They did have some that dominoed where they fixed one thing and then two more things showed up. So those repair costs should include all that. It wasn't just the initial repair. But there were two I think that came back after -

CHAIR WEISSER: It is real world, except you have a bunch of techs that knew that every step was being monitored.

MR. MCCARTHY: Right. And you know, in the program that we did here at ARB, they didn't know they were being monitored. You know, we sent them undercover and we tried to use Gold Shield stations because we'd say, hey, keep fixing it until it passes. You know, because these were gross polluters, you had to be a test-only or Gold shield to be able to re-certify and so we tried to use those guys almost all the time so we could just say hey, did it pass, well no, all right, well fix it, what else do you have to do and try to keep them in that loop so we could get the total repair cost just like a consumer would do.

CHAIR WEISSER: Okay, we need to - Bruce, do you have anything? Just a couple of things and we - we're running a little late.

MR. MCCARTHY: Sorry.

CHAIR WEISSER: You know, I think the key message that I got and your presentation is really marvelous, I wanna thank you for your energy, knowledge, and the fact that you're working for the State. You really emphasize the different purposes of the program and the - the sort of advance benefit that you can get out of OBD that's not present with more traditional testing. And if you're wondering whether we got the message, at least one person got that message.

MR. MCCARTHY: Okay.

CHAIR WEISSER: I'm really interested in understanding, however, what the implications are of the extension of the exemption from four to six years over the utility of the OBD program. You know, there's nothing that would make me fix the car after the warranty on the emission control equipment is over, which is - what is it now in California?

MR. MCCARTHY: $350 for anything that turns a light on, but most cars have bumper-to-bumper of $336 so most people associate it with a $336.

CHAIR WEISSER: Yeah, $336, but that's very optimistic since the average user is going 16, 17,000 miles, so really you have about an 18-month to 2-year warranty.

MR. MCCARTHY: Right.

CHAIR WEISSER: And then given a choice for the next four years, I guess I'll by a little piece of black tape and just cover the mill light.

MR. MCCARTHY: Certainly it's a possibility. I mean we - we have data from before we went to that to try to see how many were showing up or ignoring it until they had to show up at I/M.

CHAIR WEISSER: And what's the data show?

MR. MCCARTHY: It is a pretty small number. We had failure rates of two and three percent, I believe. I'd have to double-check to make sure, but I believe that was the number that we were seeing. On four or five or six-year old - four or five-year old cars.

CHAIR WEISSER: So you were having two to three percent failures on five and six year old cars that are not being fixed.

MR. MCCARTHY: Off the top of my head. I mean, it was awhile ago that I looked at that data. But I believe it was in the ballpark, but you know, so we were spending money to test '98 clean cars -

CHAIR WEISSER: I think that's a tremendous issue. You know, we have a -

MR. MCCARTHY: Yeah, absolutely. And I mean I agree with you. I think most people the warranty - you know, after three years or 36,000 miles, which they'll get to before three

years, probably stop - although there's probably some trends, probably not a step change.

CHAIR WEISSER: Obviously.

MR. MCCARTHY: You know, there's some - because usually a two-year-old car still has quite a bit of value. Somebody's got a lot of money into it.

MALE: Even a (unclear) right?

MR. MCCARTHY: Right. So there's a timeframe in there -

CHAIR WEISSER: Well, I think that to some extent there's a little disconnect between the extension of the exemption and increased reliance on OBD, particularly for the first few years.

MR. MCCARTHY: And you know, the only other, one of the other datasets we have, there's been some states that have run advisory OBD programs and so they're not failing on OBD. And we had some data to see maybe what a better real-world rate is. There's roadside data, EPA's high mileage data, they grabbed only cars with over 100 thousand miles and granted they were probably cars that had higher mileage group rates, because they got them - you know, they're gonna '96 and '97 higher mileage groups to get the 100 thousand. They did recruit a lot from repair shops, so while the car wasn't necessarily in for a repair, it might have been for an oil change or it probably had some reason that it was visiting a repair shop on their fleet, you know, they had a

mill rate of 30 percent, 25 or 30 percent. So, 60 - you know, two-thirds, three quarters of them were passing with no fault detected, a quarter to a third of them had a mill on at over 100 thousand miles. You know, that's just one more piece of the data in trying to project out where the mills start coming on.

CHAIR WEISSER: Well, I look at your California Smog Check fail rates -

MR. MCCARTHY: Yep.

CHAIR WEISSER: - and you know, you have the rates which become miniscule as you learn newer model years. But I'm kind of curious how you get that data if these cars aren't being called in for Smog Check. Is this just a projected data out of the -

MR. MCCARTHY: No, well, this was second quarter 2005 data, so we were still grabbing -

CHAIR WEISSER: Oh, okay.

MR. MCCARTHY: We were still grabbing cars at that point. We still had a big chunk of cars that were through the program that hadn't - the exemption hadn't kicked in on yet. And of course, there's still some out-of-state stuff trickling in, but the numbers get real small on those bars. You start looking at bars of 60 and 40 and 60 and 80 cars instead of thousands and tens of thousands.

CHAIR WEISSER: Is there a relationship between the OBD system and the referral of cars to test-only versus test-and-repair, versus consumer choice between test-and-repair and test-only? Is there - is there -

MR. MCCARTHY: You mean like an OBD fail rates at different types of stations or I'm not sure what you're asking yet.

CHAIR WEISSER: Well, you know, you were - maybe this is something that we should explore in the future but you were talking about, you know, how you could see the program evolving with greater reliance on OBD. I'll just for today pass it up because we're running out of time.

MR. MCCARTHY: Okay.

CHAIR WEISSER: Let's open it up to questions or comments from the audience. We'll start in the back with Mr. Ward.

MR. WARD: Thank you, Mr. Chair, Members. Randy Ward representing the California Emissions Testing Industries Association. I know that I certainly appreciated Mr. McCarthy's presentation and I expect the rest of the audience did. Thank you very much. One of the things that he mentioned was the potential for the cost being driven down for testing because OBD II test obviously is a much easier test and I think this is more for the BAR - or the ARB's edification than it is for yours, but about 70 percent of the cost of a smog test at a test-only, and I would let, you know, Bud and John and Dennis and others comment on

test-and-repair, but is attributable to fixed cost as opposed to labor. So I think to assume that you're somehow gonna have a Java City Quick Stop go in and get plugged in is unrealistic. Another issue that I want emphasized, and I've raised the issue before, and I thought Dennis did it very well today, was the issue of the confusion among manuals, the lack of detail that's provided in manuals. Roger has wrestled with this and communicated ineffectively for a number of years with the Bureau and the Bureau has wrestled with it. There are numerous engine types, numerous types of vehicles out there, much more than there were, you know, so many years ago and when you need tech support and you've got a consumer there, you don't get it. The best you can do in some cases is write a letter to the Bureau saying the information that I had was inadequate, therefore, you do a CYA letter to the Bureau and you indicate what you did and how you performed that test, but you will never be able to get an answer immediately on the phone. In many cases, you're risking, literally risking your license, is that correct, Roger, by conducting a test inconsistent or where you don't have good information and Roger can - can add to this, but, so you send them down the street where someone who is less concerned or the dealer where the consumer is going to pay not only a lot more money, but in either case

have been seriously inconvenienced. In any event, Dennis, I think you raise a very good point. Thank you.

CHAIR WEISSER: Roger, do you have something you want to add?

MEMBER NICKEY: Yes, I did, because I've dealt with this many, many times. And usually the answer I get from the Bureau is if you don't have adequate information, don't test the car. So we end up going to the customer and saying I'm sorry, I can't test your car. Then they ask you why you can't test it and you say because it's untestable and I have no procedure to do it with it. He goes down the road, like Randy says, gets it tested some place else less concerned and we get the looks okay to me scenario and we look like idiots.

CHAIR WEISSER: Yeah.

MEMBER NICKEY: And I've had a couple of them come back and go - nay-nay-nay at me because they said well, they tested down the street and you wouldn't do it. Or they end up going to the dealership and paying twice as much.

CHAIR WEISSER: I think the issue, maybe I misheard Randy, but the issue associated with the capital investment for both test-and-repair and test-only and the implications of movement to more reliance on OBD, more reliance on remote sensing is a substantial issue that the State of California has to come to grips with in terms of evaluating future program directions. We gotta get it on the table, we gotta

look at it squarely. Because the fact is that - well, I'll just stop there. It's something we're gonna be wrestling with in upcoming years, I guarantee it. Okay. Other public comments? Len? Happy 2006 to you.

MR. TRIMLETT: Len Trimlett, Smog RFG. As these cars get more advanced electronically and, in terms of emission control systems, one of the things that I keep hearing now is diagnostics. The emission systems being more complex, it appears possibility that there's insufficient training for the technician in terms of diagnostics and going through these systems. Is that possible?

CHAIR WEISSER: Well, I think we've all heard issues associated with the training required to deal with OBD II and the information available to do that training.

MR. TRIMLETT: I think that - I think that's one place that's a big area of concern.

CHAIR WEISSER: Okay. Thank you, Len. Mr. Peters?

MR. PETERS: Mr. Chairman, Committee. Charlie Peters, Clean Air Performance Professionals, representing a coalition of motorists. I'd like to start to say that I found the previous presentation provocative, interesting, and a whole lot of other superlatives, and that this is probably one of the very few folks that, in fact, is on virtually a daily basis dealing with real cars, dealing with people at the manufacturer's level, people at the aftermarket level,

etcetera, and actually making a very significant contribution to this process for California. And I salute this gentleman absolutely for what he does and the contribution that he has made. Having said that, I also would like to say that he's in a position - he's on a hot-seat. He's in a position that can put the wrath of God right straight on his backside. Probably on his front side, too, in that if issues such as (unclear) that have a 90 percent cleaner standard than the regular cars that we're looking at today that have a 15-year, 150 thousand mile warranty and if in fact you are testing those cars and in fact you find them at fault and if in fact the manufacturer can be required to recall everyone of them and fix them, that that could put some serious heat on his front side and backside. When you have issues that - his contribution is huge, but having said that, the fact that there are stakeholders, there are people who can orchestrate fire on him and maybe work their way in a way, I would ask you to, in addition to looking at all the marvelous things that he does and his contributions, the Committee take on a responsibility of taking that and looking even further and take a responsible position to support him and support the possibility of situations like OBD II can be manipulated with a computer program out of a laptop and make it where it passes every test, every time and support him in a way

that’s going to truly contribute to - further to the State of California, because I think this gentleman does a marvelous job and with your help, he can do an even better job that will better compliment a future for California. Thank you.

CHAIR WEISSER: And thank you, Mr. Peters, and on behalf of Mike, I think I will thank you. Mike passed me a note while you were talking saying that’s why he makes the big bucks. Thank you very much for your kind words. Are there any other comments from the public? Mike, on behalf of the Committee, I want to thank you. You packed more information and energy in the time you had than I for one had the ability to absorb. So, I think you are going to being hearing from us again because I’d like to learn more about the program and you have quite a bit of knowledge to share with us. So thank you. Folks, we are lagging well behind our schedule. I guess it’s now time for lunch. We’re gonna do legislative update right now and I know we’re going to be losing some Committee Members and - pardon me? We have Emily on tap, but we will end this at 4:00 and I’m real worried that I don’t wanna cut you short. So let’s see where we are, how much time we have left and how flexible you are in terms of the time you need and we’ll go from there. Rocky, could you give us the legislative report now?

- o0o -

MR. CARLISLE: You bet. Starting off with AB184, Cogdale (phonetic), it was a pilot program to replace gross polluting vehicles with cleaner burning vehicles that were donated to a program. Essentially, I spoke with the Assemblyman staff yesterday; that bill is dead. They're gonna reintroduce a bill that's gonna decrease the scope, both in geography and time and it's gonna be in the San Joaquin Valley. So that'll be introduced shortly.

CHAIR WEISSER: Excuse me, that's going to be introduced this year, in this session, the second year of this session?

MR. CARLISLE: Yes, correct.

CHAIR WEISSER: Okay. Thank you.

MR. CARLISLE: AB226, still in Senate appropriations. I didn't get a call back on that. On AB386, we had a meeting at the Capitol the first part of this month with the consumer groups and that was a very productive meeting. That one is still moving forward. They're trying to resolve the issues that the consumer groups have primarily with regard to the open-endedness, if you will, of the - that it provides the Administration in adopting this agreement between ARB and BAR. AB578, that's the Horton bill that would allow Gold Shield to test directed vehicles. That's still moving forward. They are meeting with the interested parties on that and I did not get a call back from the Assemblywoman's office. On AB898, that's a bill that wants to reduce the

number of hours for training for technicians. They want to take it down to 60 hours from the current 180 hours. I haven't heard anything on that either, so it's hard to say where that one is right now. Like I say, I didn't get a call back from the Assemblywoman's office.

CHAIR WEISSER: Let me just ask a question on that one. That's still in the Assembly, is that correct?

MR. CARLISLE: Correct.

CHAIR WEISSER: So that has to move out by the end of this month?

MR. CARLISLE: It's gotta be out by the end of this month, yeah, or it dies.

CHAIR WEISSER: So, it's -

MR. CARLISLE: So -

CHAIR WEISSER: It's at an uphill battle.

MR. CARLISLE: And finally, AB1870 is a bill that was recently introduced by Assemblywoman Lieber. That's a smoke bill that would require a smoke test component on the Smog Check inspection process by July 1st of 2007. They originally were going to increase the cost limit in that bill. That did not get introduced as part of this bill, so I don't -

CHAIR WEISSER: By increasing the cost, you mean adjust the $450 limit according to some -

MR. CARLISLE: Correct, to about $700, where it should be.

CHAIR WEISSER: So, is it possible for you to chat with the staff?

MR. CARLISLE: I will chat with the staff on that issue -

CHAIR WEISSER: Okay.

MR. CARLISLE: - and see what happened, because the last time I talked to the staff, that was going to be a component of the bill.

CHAIR WEISSER: Yeah. Do we have a position from either ARB or BAR on the smoke test, on the Lieber bill yet? Are you going to have a position? We don't know. Up to the Gov. Okay. Thank you.

MR. CARLISLE: And finally, Senate bill 953 by Romero. That one is the follow-up actually to Robert Morgester's presentation that he did November of '04 for the Committee and that's gonna owners of improperly registered vehicles to file for amnesty and avoid prosecution, but they will have to pay any past due penalties as a result of undervaluing the taxes due on their vehicles and they will have to be brought into Smog Check compliance. And once again, these vehicles have to go to the Referee, I might add, so it's another issue with the RFP out there.

CHAIR WEISSER: Yeah. Okay, I'm going to suggest in the future, Rocky, that we combine the Executive Officer's Activity Report and the Legislative Update into one item.

MR. CARLISLE: We'll do that.

CHAIR WEISSER: Okay. Are there any comments from - or questions on the part of Committee Members regarding this? Are there any public comments on any of this? Len?

MR. TRIMLETT: Len Trimlett, Smog RFG. Exactly where does that SB953 bill stand now? I've seen no updates in the legislative bill -

MR. CARLISLE: Nor have I. Last I checked it was still in Senate transportation and the -

CHAIR WEISSER: This is 953?

MR. CARLISLE: Yes, 953.

CHAIR WEISSER: Yeah.

MR. TRIMLETT: Right. There is no legislative update on that bill in terms of actual wording and that's what I was looking for.

CHAIR WEISSER: Don't know. I suggest you check the daily file, Len, you have as good access to it as I do through the web.

MR. TRIMLETT: Okay.

CHAIR WEISSER: I haven't heard anything in terms of hearing action on it. Are there any further public comments? Mr. Peters?

MR. PETERS: This is on the legislative update?

CHAIR WEISSER: Yes, please.

MR. PETERS: Okay. The AB386 was that all interested parties that you met with or what kind of groups met on that issue?

MR. CARLISLE: That was consumer groups that met with Assembly Lieber's staff.

MR. PETERS: And with - okay, consumer groups and just yourself, or how did that work?

MR. CARLISLE: My self, Jude Lamare, there were a couple environmental groups, as well.

MR. PETERS: Anybody else, just Jude off the Committee?

MR. CARLISLE: Yes.

MR. PETERS: And nobody else off the Committee?

MR. CARLISLE: No.

MR. PETERS: Because that certainly is of interest to me, AB386 and I was just curious. Thank you.

CHAIR WEISSER: Thank you, Mr. Peters. Any other comments, questions from the audience? Okay.

- o0o -

The next item is the draft IMRC Report. What is it that you would like us to chat about in that regard or is that just on there as a potential placeholder?

MR. CARLISLE: That was just a placeholder, yes.

- o0o -

CHAIR WEISSER: Then we have Report Topics and that's a placeholder.

MR. CARLISLE: Correct.

- o0o -

CHAIR WEISSER: Emily? Here's a choice. 25 minutes today or all the time you need next month. My advice to you would be wait until next month because I think people are flagging up here and I want folks to hear what you have to say, if that's okay. Pardon me? Emily, it's in Emeryville. Will that create any sort of problem for you, our meeting in February? Okay, great. Excuse me? Yes, we're meeting at the Emeryville City Hall. Okay, for those of you who live in Sacramento, you might want to explore taking the train. It's kind of a cool trip and it drops you off within a really hop, skip, and a jump of a cab ride. It's nice. Jude?

MEMBER LAMARE: Well, I very disappointed that we won't be hearing anything from Emily today. And I'm just wondering whether she brought anything in writing or if there's anything that she can give us to look at before the next meeting so we might see what - is there something in the packet?

MR. CARLISLE: Yes, there is. There's a presentation.

MEMBER LAMARE: What number is that?

CHAIR WEISSER: I think it's 6B.

MEMBER LAMARE: Thank you.

MR. CARLISLE: Yes, it's right after Jeffrey's.

CHAIR WEISSER: And I apologize, Emily, we usually are able to do everything, but today just didn't work out.

MR. CARLISLE: Mr. Chairman, if I might add, next month I'm going to have a van available for any Committee Member that resides locally that wants to ride over to Emeryville with us.

MALE: Who's driving?

MR. CARLISLE: I am.

CHAIR WEISSER: Is it padded? Okay.

- o0o -

We're now gonna move to just the general public comment period, so if there's anybody who has any general public comments, we'd like to hear them now and we'll start with Mr. Rice. Bud? This is on the Smog Check program, not on the Steelers soon-to-be triumphant victory walk over the Seattle Seahawks.

MR. RICE: True enough. Thank you. Bud Rice with Quality Tune-up Shops. Just in terms of a quick question for me. If the IMRC is in support of an action or a bill, or something like that, does the IMRC have some kind of a polling that's done where they - where the Chairman might say, is the IMRC in favor of this, let's second it, have you guys vote on it, and if the count ends up being, let's say - let's pretend Dennis was still here, those three guys are saying, no we don't like this and this six over here are saying yeah, we like this. Just in terms of a majority decision, six beats

three, so is it the opinion of the Committee that you are then in support of whatever it is you're voting on?

CHAIR WEISSER: We act according to Robert's Rules.

MR. RICE: Okay.

CHAIR WEISSER: And Robert's Rules provide that if there's a quorum present that a majority of those present are sufficient to pass a measure. So the answer to your question, which you wanted to be a lot simpler than what I'm making it, is yes. We do not have to have unanimity in order to take a position.

MR. RICE: Okay, then -

CHAIR WEISSER: Now, excuse me, Bud. Just to be clear, on legislation, we do vote to take a position. It's not something that I as the Chair or Rocky as the Executive Officer do on their own as much as I'd like that to be the case sometimes.

MR. RICE: Then just a quick follow-up. If there is some disagreement on that, and in the end the vote is taken and it is then the position of the IMRC to then back this legislation or back this whatever it is, in the same way that there is with the Supreme Court ruling, where there may be a minority point of view and a majority point of view, there isn't any provision for that, so the three that don't like it have a chance to at least get into the record their feelings about what they don't like, because the ones that

are in support of it do have a way of getting that into the record, because it was passed.

CHAIR WEISSER: Bud, we live in America. We have a free country and free speech is protected mostly. Any member of this Committee has the right as an individual to represent their views in the legislature -

MR. RICE: Okay.

CHAIR WEISSER: - at any point in time. So, whether or not the IMRC in a letter that we would write would say three people, you know believe this, two people believe that, but the majority believe this or not, any individual can make a comment to the legislature along their lines. I think we have to pick and choose when in fact on an issue it's important for us to actually note in a letter what the minority views are. I think it's a case-by-case kind of thing. Hopefully, that will occur very infrequently.

MR. RICE: All right. Thank you. Thank you.

CHAIR WEISSER: Mr. Peters?

MR. PETERS: Mr. Chairman and Committee, Charlie Peters, Clean Air Performance Professionals, coalition of motorists. In the discussions today, it was pointed out that on occasion it was found that inappropriate activities took place during audits, during times that cars, where they knew what was broken, they took them out to get them fixed, clean-piped and so on and so forth and the question is, did the Smog

Check provider every find out that he didn't do his job or he did it wrong, or was that after he got the cuffs on and was in jail? If you don't tell people that they did something wrong, then they continue to do it wrong, possibly, maybe for years before they even find out and I think that's a good question to ask. Another question is, we've heard an awful lot about these OBD II failures, but we didn't hear any comparison between what happens at the dealer when it's under warranty and what happens when it's not. I think that's a really good question for the Committee to find out if the car - if the costs are different, if it's handled different, if the effects are different in fixing the problem on the cars that are still being produced, if that - if there's a big difference there and I think you might find there to be a huge significant difference there in cost and procedures. The final issue is the issue of training and education and information. If there are no demands for performance that are real, then you're never gonna have any market for information and like it was pointed out that there are significant improvements coming down the line in aftermarket providers' information, but if in fact you set standards demanding that cars that are broken get fixed, then you're gonna create demand for information and that information is gonna be there and be provided because there's a market for it. If we're gonna

sit here and depend on Government to take care of everything and supply all the information, then we're likely to get just a whole lot of misinformation and lack of performance. So to solve the information problem, you create a demand, which creates a demand to get the car fixed and when the guy's gonna get the car fixed after not doing his job, he's gonna get it fixed and that demand for information is gonna be there and you will make a huge difference in the availability of information provided by the competitive marketplace which will be quick and cheap and accurate and get the job done. When we're gonna go, Mr. CARB, please bless us with all the information so we got an excuse when we do it wrong, he ain't never gonna get the public served and the air cleaned up in California. Thank you.

CHAIR WEISSER: Thank you, Mr. Peters. Mike, with a simple yes or no, were the folks that were practicing malfeasance alerted to their - the error of their ways?

MR. MCCARTHY: In one case, yes, because I went and talked to the person directly, to point out because it was a tough diagnosis, the actual diagnosis, and I wanted to point out why he might have overlooked it. In the other cases no, I have not turned the information over to BAR.

CHAIR WEISSER: Including the clean-piping one?

MR. MCCARTHY: Including the clean-piping one because we were in a weird situation where we were recruiting from stations and

then taking them to different stations undercover and we were trying to maintain some participation in the program without letting others know or let the word get out that ARB is out there doing enforcement and be suspicious of every car that comes in. So we -

CHAIR WEISSER: I don't want to hear anything more. Are there any other folks that would care to share questions? Committee Members, anything further anyone wants to raise on any subject?

MALE: Just a quick one. I agree with Charlie 100 percent on the training thing, but I just want to submit one more thing. I advanced the idea that all of the training is available. The problem is motivating technicians to go take advantage of it.

CHAIR WEISSER: Yeah. Ladies and gentlemen, with great forbearance to Emily Wimberger for allowing us to forego her presentation today, placing it on the Agenda for the first thing after the Executive Officer's Report at our next meeting, I will now, by adjourning this meeting, bid you all a fond adieu until February. The meeting's adjourned.

- MEETING ADJOURNED -

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TRANSCRIBER'S CERTIFICATION

This is to certify that I, TERRI O'BRIEN, transcribed the tape-recorded public hearing of the Bureau of Automotive Repair dated January 24, 2006; that the pages numbered 1 through 209 constitute said transcript; that the same is a complete and accurate transcription of the aforesaid to the best of my ability.

Dated February 2, 2006.

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Terri O'Brien, Transcriber
Foothill Transcription